

## Union condemns Stirling takeover bid

by Olga Wojtas  
Scottish correspondent

Scottish education college lecturers have bitterly condemned a bid by Stirling University to take over students and courses from Callendar Park College, which is threatened with closure at the end of this session.

The Association of Lecturers in Colleges of Education in Scotland (ALCES) has just received copies of a leaked letter from Stirling's principal, Sir Kenneth Alexander, to the chairman of Callendar Park's board of Governors, suggesting that the university take over some of the staff and functions of the college.

Unlike the colleges, Stirling is financed not by the Scottish Education Department but by the University Grants Committee, and Sir Kenneth says in his letter that the university would negotiate with the SED for a transfer of funds enabling some of Callendar Park's staff to become uni-



Sir Kenneth Alexander  
university staff.

Dr Robin Lobban, chairman of ALCES, said the union believed very few staff would be transferred, and that there had been "absolute anger and disgust" at Stirling's move.

"This is a time when three colleges are fighting for their lives, they've put up a fabulous campaign against the Government, the Government is putting enormous pressure on the board of governors in Callendar Park to come and talk about closure, and now we find Stirling has been in conversation with the SED saying that if Callendar Park dies, they'll pick up the bits."

The Scottish Education Department is refusing to comment on the matter. It has always been assumed to favour Callendar Park being linked with Moray House College in Edinburgh. Stirling University, working closely with Callendar Park, already runs a BEd degree for intending secondary teachers. Sir Kenneth's letter indicates that the university would like to expand into the field of primary degrees as well as into other work currently done by Callendar Park.

There is some speculation that Stirling is trying to strengthen its opposition

by building up its education courses—it is the only Scottish University involved in teacher training.

"Stirling don't apparently have the money to provide this expansion in primary education, so they're trying to get the money from the SED," said Dr Lobban.

As it does not come under the jurisdiction of the SED, Stirling has not been subject to the Government imposed intake figures in the colleges. Its figures have been steadily rising over the past few years, while college intakes have been more than halved.

"We thought it was an anomaly in a time of massive cutbacks, but the colleges even in their difficulties have not tried to take work from anyone else," said Dr Lobban.

ALCES is now to approach the Scottish Association of University Teachers, the STUC, and the Scottish National Union of Students for their views.

## Overseas figures 'guesswork'

by Ngaiio Crequer  
Lecturers at London University have accused the Swinerton-Dyer committee, which is drawing up recommendations, of being politically naïve and unrealistic.

The response by the Association of University Teachers to the report of the committee chaired by Peter Swinerton-Dyer, the chancellor of Cambridge University, says that figures predicting a 50 per cent fall in overseas student numbers are only shabby guesswork.

It has also warned the committee to leave the constitution alone and to say that going down the road of redundancy would prevent any rational discussions about the future of the university, however sensible the were.

The Swinerton-Dyer committee, which is examining all non-media education at London has now interviewed seven heads of multi-faculty schools. It hopes, to complete its stage of interviewing by May 11 and to produce not one but several different reports by the end of the summer.

Sir Peter said this week that the delay in letters from the University Grants Committee on recurrent grant allocation. "These may not come out until the end of June, or even July although I may be being over-optimistic," he said.

The AUT response expresses a "complete disagreement with the politically naïve assumptions made by the committee about the long-term financial future of the university."

It says the committee has taken the worst possible set of assumptions and then assumed that they will inevitably happen. "The AUT does not consider that either a rational or a sensible way to plan the future of the university."

It also says that schools will not idly by and watch their overseas numbers diminishing.

Although the APR, at 12.5 per cent of 18-year-olds, still lags behind the figure of five years ago, when entrants to the disbanded Certificate in Education courses are discounted, the trend is upwards.

Long-term forecasts by the DES had allowed for a continuing decline in participation rates, picking up only in the mid-1980s when the number of school-leavers began to drop. However, after remaining steady at 12.4 per cent for two years, this year's rise in the APR may bring about another revival.

Despite a 17 per cent overall decline in the number of overseas students

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## Social scientists discuss setting up their own British Academy

by Charlotte Barry

Social academics are considering the creation of a British Academy for the Social Sciences, designed to boost the subject's academic standing and political influence.

Heads of learned societies and pressure groups will meet in London early next month to decide whether to put the plans into action.

The initiative comes from the British Sociological Association with strong backing from the Social Science Research Council. Outgoing BSA president Professor John Eldridge of Glasgow University has written to all learned societies and groups to canvass their opinion.

The idea was first proposed at a joint meeting of the BSA executive with SSRC chairman Mr Michael Posner and senior officials. The meeting was aimed primarily at reconciling the differences between sociologists and the council which have flared up in the past.

For some time now many social scientists have felt that while the influential Royal Society, the Royal Society of Edinburgh and the British Academy have represented the interests of physical sciences and the arts, the social sciences have missed out.

Although many social scientists look to the British Academy, their disciplines are subsumed largely into wider subject groupings such as history, economics and economic history, Oriental and African Studies, and social and political studies. Psychology and geography are two notable omissions.

In the United States social sciences are included more specifically in the National Academy of Sciences and among the 23 sections there are those for anthropology, psychology, social and political sciences and economic sciences.

Professor Eldridge said: "There's definitely a gap regarding the social sciences. At the moment the SSRC has a considerable voice in the social science context but very properly it has its own interests and concerns. The thinking is that maybe an association of people who actually represent all learned societies in social sciences may have something to say collectively."

For its part the SSRC has made it clear that although it wholeheartedly supports the concept of a new British Academy for the Social Sciences it will be taking a back seat. Mr Posner believes that as an independent voice the academy should have a similar relationship with the SSRC to that of the Committee of Vice-Chancellors and Principals and the University Grants Committee.

A blueprint for the academy has yet to be worked out and the BSA executive will present tentative proposals at the meeting next month.

Professor Eldridge said: "Above all I would like to avoid it being an elitist organisation. We hope the idea will be fairly acceptable, but what shape it will take, what it will do and what its primary function should be should cause considerable discussion."

## Sandwich courses reviewed

by Ngaiio Crequer

The Government is to carry out an urgent review of sandwich course provision because of the difficulty students are having trying to find placements in industry.

Sir James Hamilton, permanent secretary at the Department of Education and Science is arranging a series of meetings with the Council for National Academic Awards, the University Grants Committee, Committee of Vice-Chancellors and Principals, Universities Committee on Integrated Sandwich Courses and others to consider what action can be taken. He will also raise the matter with the Confederation of British Industry.

UCISC has estimated that in the last year the universities and polytechnics have lost about 15 per cent of the industrial placements they need. It has told Sir James that some of the technological universities have had to change their four year sandwich degree courses to three year full-time. This will also have repercussions for industry.

The position is made worse because of the uncertainty of the industrial training boards, whose future is now under review.

Mr Alan Daniels, chairman of UCISC has told Sir James that they are "greatly concerned over the future of the technological universities. The uncertainty of the UGC grants and the falling income from overseas students are causing the universities to make contingency plans that if implemented would seriously retard their development."

"This situation has created a dependency and a depression of morale that is damaging the system and destroying the enthusiasm of both academic staff and employers."

"We believe that view of the Government's stated aims, the technological universities should be considered as a special case within the UGC system and not further penalised by economic cuts which would cripple a movement that has grown in strength and organisation over the past ten years."

Mr Geoffrey Caston, secretary general of the CVCB has also written to back up these points. "There is serious concern in the universities that the number of training placements might be affected by the proposed changes in the arrangements for promoting and funding industrial training in this country, and so far as placements provided by employers in the public sector are concerned, by the constraint on public expenditure."

US Co-op movement, page 4

## Committee may quiz Carlisle over adult education

Education Secretary Mr Mark Carlisle is likely to be scrutinised by the Commons Select Committee on Education on proposals to change the law on further and adult education.

Mr Christopher Price MP, chairman of the committee, said last week that the special session would probably be in early July.

Speaking after addressing the National Institute of Adult Education conference in Hull he said: "The select committee ought to have the chance to scrutinise plans to change the law on further education before that law is changed."

Earlier Mr Price told the conference that he was concerned by Government noises about strengthening the legislative framework of further and adult education.

"The real danger is that the Government will come forward and say that the *quid pro quo* of changing the legislation for 16-19 is that it can no longer sustain the mandatory duty of local education authorities to provide further education for the over 19s," he said.

Mr Carlisle has now assured adult education bodies that they will be

consulted fully over any changes to sections 41 and 42 of the 1944 Education Act. The amendments are being discussed by a joint central and local government working group called Further Education Legal Basis.

Local authority associations are said to have agreed that the Government strengthen their statutory duty to provide education for the 16-19 age group but insisted that adult education be left in vague terms.

Adult education groups were angered that broad agreement seemed to have been reached behind closed doors without prior consultation with the service.

In letters to both the Advisory Council for Adult and Continuing Education and the NIAE Mr Carlisle says that no final decisions have yet been made and FELB is expected to report to him shortly.

"I can assure you that no amendments to the law will be brought forward without wider consultation as previously indicated in our White Paper on special needs in education, and that the interests of adult and continuing education are being kept in mind," his letter to ACEACE says.

## Putting faith in computers

The Society for Promoting Christian Knowledge is to spend £45,000 on investigating ways in which computers can be used in Christian education and communication. The research is being carried out at Durham University.

The idea is to use the Post Office's videotex system, Prestel - which gives subscribers access to central computers - to supply question and answer programmes that follow religious arguments from beginning to end. Already one programme, on the existence of a personal God, has been introduced and researchers hope to provide more.

Instead the Government says it plans to review and extend the membership and functions of the Library Advisory Council in its response to the fourth report of the House of Commons Select Committee on Education, Science and Arts.

"We accept the need for a properly considered approach to the future of information services, but we do not believe that it would be appropriate to establish a new and separate body," the Government's response says.

The council is to be given a new title designed to reflect its functions more fully and encouraged to establish machinery for examining special problems in the information field. Its work will complement the Interdepartmental Coordinating Committee on Scientific and Technical Information which is concerned with specialized information advisory services both within and outside Government.

The appointment of a minister to oversee information policy would hamper the operation of institutions and Government departments which have developed information services in response to their own specific needs, the Government feels. (Information Storage and Retrieval in the British Library Service: Observations by the Government on the Second and Fourth Reports from the Select Committee on Education, Science and Arts Session 1979-80, HMSO, £1.10).

A minority took a rather more optimistic view. Dr R.F.M. Robins at Plymouth said that his impression was that although a number of polytechnics had serious financial problems most would be able to operate without significant redundancies. But he added that expenditure on equipment and other consumables was now at a critically low level.

Applications from overseas students to polytechnics are so far down by 22 per cent compared to last year, according to an interim survey by polytechnic registrars.

Overall applications appear to have fallen by 7.5 per cent on 40,000 a total of received by 22 polytechnics up to the end of February.

The most dramatic falls come in engineering and architecture reflecting the enormous slump in the construction industry in Britain. Civil engineering is down by 47 per cent, mechanical engineering by 32 per cent, and electrical engineering by 22 per cent.

The survey is one of four carried out annually by the Polytechnic Academic Registrars' Group, covering 400 courses. Not too much can be read in it to become the peak months for applications are March and April and then again in August after A-levels.

Last year polytechnic applications picked up considerably defying all the pessimistic forecasts. The collapse in interest in all trades relating to building, including town planning and quantity surveying, is the most important finding of the EARQ survey.

Full details of the THES survey on page 7.

## Information service plan rejected

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## Entrants increase could force spending rethink

by John O'Leary

An unexpected upturn in the number of school-leavers entering higher education last year could force the Government to rethink its spending plans for the sector.

Early estimates of enrolments for 1980-81, published by the Department of Education and Science, show a small but significant increase in the Age Participation Rate, brought about by a 3 per cent rise in the number of home students joining the first year of advanced courses.

Although the APR, at 12.5 per cent of 18-year-olds, still lags behind the figure of five years ago, when entrants to the disbanded Certificate in Education courses are discounted, the trend is upwards.

Long-term forecasts by the DES had allowed for a continuing decline in participation rates, picking up only in the mid-1980s when the number of school-leavers began to drop. However, after remaining steady at 12.4 per cent for two years, this year's rise in the APR may bring about another revival.

Despite a 17 per cent overall decline in the number of overseas students

joining advanced courses, total enrolments still showed a marginal increase. Both the universities and the public sector recruited more home students than in 1979-80.

If the trend continues this year, the Government's spending plans, outlined in March's White Paper, will be thrown out of step. Student awards were expected to remain approximately constant and some decline in numbers was predicted.

As well as revealing an increase in full-time students, the DES Statistical Bulletin records a further rise in the number of part-timers and in their proportion of the total number of students in higher education. They represented 37 per cent of student numbers, compared with only 26 per cent a decade earlier.

The Bulletin also shows a continuing rise in the proportion of women students, which is still recovering from the loss of teacher education places. The proportion of women in the first year of courses has risen 2 per cent in two years but is still below that of five years ago.

DES Statistical Bulletin 618/available from the DES, Elizabeth House, London E.C.1



Professor Peter Burberry, of the University of Manchester Institute of Science and Technology, demonstrates the latest product emerging from the university's energy conservation group. What looks like an executive briefcase is in fact a marketing kit developed for British Aluminium to enable customers to check the heat resistance of metal window frames.

## UGC tells of grant plans

The University Grants Committee is now likely to tell universities how it plans to distribute the recurrent grant in two stages. It will probably send a preliminary letter later this month setting limits in general terms how the system is to be reshaped to meet the "desperate" cutbacks. But the details of the cuts, naming the departments which will have to be closed, will be in a second letter which will go out at the end of June or possibly early July.

This week the Committee of Vice-Chancellors and Principals were due to meet the UGC.

## Overseas students 'would have paid more'

The majority of overseas students would have been prepared to pay even higher fees to come to Britain, according to the largest ever survey of their backgrounds and views.

Although about a third of the students interviewed had no control over the decision, most of the rest said they would have paid fees £200 higher than those in force last year. However, only a small proportion were willing to pay £500 more.

The survey, which was carried out by Professor Mark Blang and Maureen Woodhall, was published this week as an appendix to *The Overseas Student Questionnaire*. It involved a sample of 1,484

students from 14 universities and polytechnics.

Foreign students were found to have an average income in 1979 of £3,233, when fees reached a maximum of £1,230, but the range was wide and did not always coincide with the wealth of home countries. One in 20 had an income of more than £7,000 but 15 per cent received less than £2,000.

Although the report of the survey concedes that there is a tendency for poorer students to come from poorer countries, it warns against generalizations. More than 20 per cent of the students living on less than £1,000 per year were from rich countries such as

the United States, while 27 per cent of the wealthiest (receiving more than £9,000) were from countries classified as poor.

The survey also reveals the need for British courses for students from many developing nations. About half of those from countries classified as "very poor" were taking courses not available in their own country. This applied to 330 out of the total sample.

Ask their opinion on the introduction of full-cost fees, the majority were predictably critical, although the researchers again found a wide range of opinion.

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## Crime survey to be launched

by Charlotte Barry

The launching of Britain's first national crime survey is expected to be announced by the Government shortly. A major enterprise, involving detailed interviews with about 10,000 people, it will concentrate on the incidence of unreported crime.

Academics in British universities have argued repeatedly over the years the Britain is lagging far behind other countries in failing to set up a national crime survey.

Surveys in the United States, Canada, Germany, France, Holland and Australia have all shown that reported crime is only the tip of the iceberg - about one seventh of actual incidents.

Moves to set up a similar survey in this country have met concerted opposition from the Home Office and the police.

Government officials are believed to fear that evidence of a vast well of unreported crime will cause undue public fear and despondence. The police are worried that such findings will throw severe doubt on police statistics as well as its efficiency and resources.

At the moment the final decision rests with a top Home Office committee, which is due to meet again next week. If the expected go-ahead for the survey is given, it is likely that the research contract will go to an outside institute.

The Home Office is anxious to ensure that the findings are independent and therefore is not keen to use either its own research unit or the social survey division of the Government's Office of Population, Censuses and Surveys.

Among forerunners for the £300,000 a year contract who are capable of undertaking an interview survey of about 10,000 people is the independent survey research unit, Social and Community Planning Research.

The Government's change of heart towards setting up a national crime survey is due significantly to pressure from academics. At a recent criminology conference organized by the Home Office Research Unit in Cambridge, social scientists accused the department of hedging the issue.

Academics have argued consistently that a major survey like this could provide a valuable and much-needed source of data on unreported crime, already considered a major social problem. Major areas of unreported crime already identified include sex offences, domestic violence, juvenile crime and assaults in school.

## Teachers call for extra year of basic training

by Patricia Santinelli

A call for maintaining half of the annual teacher training output via the Bachelor of Education degree route and for an extension of the Postgraduate Certificate of Education to two years has come from the National Union of Teachers this week.

The NUT's policy statement which is being circulated to members comes at a time when the whole question of the balance between the two main teacher training qualifications is being debated by the Advisory Committee for the Supply and Education of Teachers.

In the statement the NUT reaffirms its support for training intending teachers through the concurrent course mode and suggests that whatever changes might be planned in its title, the most important issue is to press for an extension from a three to a four-year degree course.

The NUT believes that at least half of the proposed four-year BEd course should be devoted to professional studies. Moreover it recommends the title, content, structure and length of the BEd courses should be subject to the needs for an advanced professional qualification for experienced teachers.

The union recommends that the PGCE should be lengthened to two years for those graduates who do not have a substantial educational component in their degrees, nor subject specialism which would be directly relevant to subject they would teach in school.

But it also argues that the course PGCE could be retained where graduates have degrees which incorporate educational element and whose subjects or subjects of study are directly relevant to the school curriculum.

## Professor calls for two-way tenure

by Paul Flather

Senior academics at polytechnics and universities should in future be given limited tenure, with salaries paid partly for a fixed amount of teaching which would allow tenure, and partly for variable short-term research appointments, which would promote innovation, Professor Gareth Williams said this week.

In an address at the Polytechnic of North London, Professor Williams, chairman of the Society of Research in Higher Education's national inquiry sponsored by the Leverhulme Trust, said innovation was the top priority for the revival of higher education institutions in the 1980s and 1990s.

Professor Williams, head of the educational research department at Lancaster University, advocated the idea of "joint appointments" initially among senior academics, and the creation of a national fund, the Higher Education Development Council, as two ways of promoting innovation.

Professor Williams, speaking before next week's inquiry, said that now more than at any other time since the mid-eighteenth century institutions trading in ideas and thoughts risked sliding into obsolescence and obscurity.

Higher education institutions had expanded at varying rates recently too rapidly for their own good in the 1960s and uncomfortably slowly in the 1970s.

The crunch brought forward by a climate of stringency required innovation as a top priority.

The answer however did not lie in promoting centres of excellence, which "concentrated and consolidated into fortified walls", and linked to the idea of life-time tenure, produced elites which could easily become arrogant, warned Professor Williams.

"I can see no surer way of sapping public confidence in higher education than by the creation of a system that consists of a few ivory towers surrounded by a collection of straw huts that wish they were ivory towers."

Professor Williams contrasted the museum model, where academics simply saw their job as guarding the cultural and intellectual heritage, with the think-tank model where academics thought, and taught students to think, about the unthinkable.

Joint staff appointments would be a second way of promoting innovation. Academics would have a permanent component, a set amount of teaching in a single institution, giving them tenure, and a variable component which would involve additional research or teaching in other institutions.

Joint appointments would encourage cross-fertilization between institutions. The new council also be free to seek funds from other private sources, including sponsorship from industry and commerce. It should then provide matching grants to institutions. Money should also go to sponsor re-training of staff in innovative ways.

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## Medical schools' outlook 'rosier'

by Robin McKie  
Science Correspondent

The future of London's threatened postgraduate medical institutes now seems slightly rosier, their director claimed this week. Mr Innes-Williams, dean of the postgraduate medical federation, was speaking - after his meeting with Mr Rhodes Boyson, under-secretary for education, and Dr Gerard Vaughan, - minister of health, last week.

The meeting, attended by other representatives of the federation's 13 member institutes, was held to - warn the Government that some institutes may have to close as a result of recent university cash cuts and increases in overseas - students fees. Last year the federation, together with the Royal Postgraduate Medical School and the London School of Hygiene and Tropical Medicine, was £3.8m in the red and could lose a similar sum this year, endangering major institutes such as the child health, cardiothoracic and psychiatry centres.

The federation alone lost £2.1m, because of increases in overseas student fees and the ministers agreed that the present policy should be reviewed with regard to its implementation at the city's postgraduate medical facilities.

Mr Innes-Williams said he had put two cash-saving proposals to ministers. Firstly overseas-student fee calculations should be changed, so that institutes would lose from their grant only the amounts they could recover in fees. Secondly institutes should pay for time spent by academic staff on clinical work.

"The institutes are still in danger, but I'm now more optimistic about their future following our meeting with the ministers", he added, that the results of the Government review of funding would probably be known in July.

## Specialization condemned

by John O'Leary

Universities should concentrate on flexible general degrees of high quality rather than going in for narrow specialization as a response to industry's needs, Mr W. P. Kirkman, secretary of the Cambridge University Careers Service, told a conference last week.

He told the conference, called "The mismatch between education and employment: What are the priorities for action?", that the current trend towards specialization was a mistake.

Employers were constantly seeking graduates who could cope with numerical data, communicate effectively both orally and in writing, and work well in groups, in trying to cater for changing technological needs, there was a danger of too narrow a concentration on particular fields, he said.

"The arguments for retaining the concept of a good general education at first degree level are not just arguments for self-preservation," said Mr Kirkman. "They are the arguments of realism because they are concerned with enabling people to develop well their own particular skill. There is no advantage to anyone in turning a potentially good historian into a mediocre engineer."

Closer specialization should be available at postgraduate level, he said. Whichever course was followed, it could not be the right approach to reduce the flow of highly trained minds into industry from higher education.

Mr Kirkman added that the universities had an obligation deal with a number of long-term strategic issues confronting society in changing circumstances. Governments were not suited to the task of looking more than a few years ahead.

Among these issues was the relationship between work, education and leisure. Higher education should cater not only for the needs of employers but also for increasing periods of leisure and unemployment. The universities must not forget people if economic recovery is not to be accompanied by social breakdown.

## College governors to meet minister

by Olga Wojtas  
Scottish Correspondent

The governors of Callendar Park College of Education threatened with closure at the end of this session, have at last agreed to meet the Scottish Secretary.

But they have made it clear that they will not go back on their arguments for the retention of the college, and the college principal, Mr Tom Rue, says they have been forced into discussions by deplorable measures.

In a written Parliamentary reply, Scottish Secretary Mr George Younger announced that students at Hamilton, also threatened with closure, will be allowed a further year on site. This did not however apply to Callendar Park, and Mr Younger simply repeated the invitation to its governors to begin discussions.

A college statement says the governors had previously refused to meet Mr Younger as they felt it necessary to wait for the outcome of the Scottish Select Committee's investigation of the policy of college closure.

The committee is now to publish evidence given to it, and the governors say an impartial reading of their evidence will justify their view that money will be lost, not saved, by implementing the Government's proposals.

Mr Rae said that in talks the governors intend to build on "the very substantial gains" which Callendar Park's campaign has achieved.

"It has achieved the retention of the building for educational use which has implications for employment of non-academic staff. It has secured the employment of all academic staff since all will be transferred to another college. It has achieved the promise that inservice provision in the areas served by the College will be maintained at the present level."

"These are not minimal achievements, but gains of the greatest importance to individuals and to education in the central belt of Scotland."

Mr Rae added that the governors had a deep sense of injustice at the process of misgovernment to which they had been subjected, and believed that the question now transcended that of the closing of a college and raised very serious questions about the way the country was governed.

The governors' decision to have talks comes within a week of the leaking of a letter from the principal of Stirling University, Sir Kenneth Alexander, to the governors, proposing that the university take over some of the staff and functions of the college.

The college lecturers' union has successfully convinced what is seen as an attempt by Stirling to poach Callendar Park's students and undermine the college campaign. Staff have also been deeply angered by indications that Stirling has been discussing Callendar Park's future with the Scottish Education Department without the college having been informed.

## Higher polytechnic diploma urged

A new qualification to be offered by polytechnics to replace the rapidly disappearing Higher National Diploma has been suggested by the Association of Polytechnic Teachers.

Styled the Higher Studies Diploma, it is designed to be a broader based, more vocationally orientated qualification catering largely for school leavers with one A level or less.

It could be validated by the Council for National Academic Awards and students should be eligible for a mandatory grant, APT says. There could be links with existing degree courses with the possibility of transfer in both directions.

While APT agrees that the technical and business education councils qualifications fill a special niche, it feels they are not a replacement for HND and are not attracting the same people.

Many one A level achievers are not now catered for and they are lost to the country's pool of skilled manpower, many women currently lost to higher education, or vocational programmes of any sort, would benefit from the wider opportunities which a replacement HND would provide.

It is expected that the universities as well as polytechnics would grant exemptions for HSD students seeking entry to degree courses.

## Research council changes name

The Privy Council has agreed that the Science Research Council can change its name to the Science and Engineering Research Council. This was decided last month, when it was also agreed that future council chairmen would serve for five-year periods as opposed to the present four-year term.

A council spokesman said the move had been made in recognition of the increasing importance placed on backing engineering research at universities and polytechnics. The council's engineering board had increased research from £5m in 1973-74 to £27m in 1979-80, with particular emphasis going to potentially lucrative fields such as marine technology, polymer engineering, manufacturing systems, energy, microelectronics and material research.

Much of this had been carried out through academic-industrial collaborations and it was hoped that the change of name would also encourage smaller companies to view the council as a medium through which research and training collaboration with academics could be undertaken.

## Engineers 'need to enter public life'

Engineers can no longer afford to stand aloof from public debate on major technological issues, under-secretary of State for Education, Mr Neil Macfarlane warned last week. Speaking at a conference for headteachers and careers officers, he said more public participation would improve their standing and make their contribution to national life more effective.

"Engineers must be more ready to enter public debate about major technological issues and to seek election to public office at local and national level. They must be prepared to accept that public debate and decision making are often very messy and not stand aloof simply because the most obvious technical solution does not in practice prove to be the most acceptable."

Mr Macfarlane added that there was very considerable public misunderstanding in this country about engineering practice and careers. "Similar misconceptions about other careers are less widespread."

Schools had an important role in fostering interest in engineering, said Mr Macfarlane. "However, simply kindling the interest of young people in engineering as a career is not enough. Because of the technical and mathematical demands of the study of engineering at degree level, the possibility of a career in engineering can be very effectively blocked if young people, forced to make subject choices, drop the study of physical sciences at an early stage."

It was for this reason that the recently published paper on the school curriculum proposed that all pupils should continue with science up to the age of 16, as well as mathematics. Craft, design and technology were also important to the education of future engineers, said Mr Macfarlane. "All too often these subjects have been of low status in many of our schools and seen as primarily for less able pupils."

"In my view the development of practical skills, creativity, and the understanding of how things work which these subjects can provide is an essential part of the education of future engineers."

## Work starts on computer centre

Heriot-Watt University has begun building a £520,000 computer centre, financed by the university grants committee.

The centre, expected to be completed in 15 months, is the first new building on the campus since earlier stages of major development were completed in 1976. The centre will house Heriot-Watt's £390,000 computer system acquired at the end of last year.

Director of the centre, Mr Allen McIvor said: "The new Burroughs computer system is a design for the decade bringing the power of the computer through communications networks to the peak of the research."



Shot in the arm for chemistry at Edinburgh

Dr Alfred Spinks (right) chairman of the Government's advisory committee on biotechnology, opened a new suite of laboratories in Edinburgh University's chemistry department.

The work there is being undertaken by Professor Ian Scott (left), who is pursuing an internationally important programme of research into metabolic processes. He has been awarded a grant of £365,000 over four years by the Science Research Council, one of the largest sums it has ever allocated to a single researcher in chemistry.

## Union presses for expansion

by David Jobbins

An about turn in Government policies to enable more working class students to enter university is to be sought by a major manual workers' union.

Next week's annual conference of the National Union of Public Employees is confidently expected to back a call for an expansion rather than contraction of the universities.

A resolution from the union's Sussex University branch says that even before the Government "abandoned" the Robbins principle, children with working class backgrounds were denied a fair chance of a university education.

"At a typical university in the 1970s only 20 per cent of students were children of manual workers. Although this group comprised 60 per cent of the population."

## New body to fight course pressures

Directors of social work courses in universities and polytechnics have banded together in a new body aimed at fighting external pressures on course approach and content.

The decision to set up a network of regional groups was made at a recent conference in Birmingham of more than 40 heads of course providing certificates of qualification in social work.

Members of the new organization include Professor Rolf Olson of Birmingham University, Professor Martin Davies of the University of East Anglia, Professor Martin Herbert of Leicester University and Dr Bernard Davies of Warwick University.

Many were leading names in the recent controversy surrounding the strengthening of assessment requirements for the CSWV laid down by the Central Council for Education and Training in Social Work.

Heads of social work courses opposed the changes saying they were a threat to academic freedom and were a hidden means of introducing a curriculum. Some attacked employers for exercising unreasonable control over social work training and accused services departments of operating an unofficial blacklist of "unacceptable" courses.

This week Dr Bernard Davies said on behalf of the new group that they would be seeking to defend the positive elements of social work training. This included teaching students to be critical, analytical and thinking in policy terms instead of simply carrying out set agency procedures.

The new group also intends to monitor closely the effects of higher education cuts on social work training, as well as the withdrawal of discretionary grants and secondments by local authorities.

Dr Davies said: "Many of the basic values for which social work education has stood for are being contradicted by Government policies. Welfare agencies are being run down when the demands of the unemployed for services are increasing."

## Institute asks university to change course

The Institution of Chemical Engineers has asked Sheffield University to introduce phased changes in its undergraduate chemical engineering course. It wants greater emphasis on some subjects and an increase in the amount of teaching and is monitoring the modifications.

It is understood that the university is aiming to produce a completely new course by the beginning of the UK academic year.

The work of the department was the subject of a highly confidential internal report at the end of last year, and last week a visiting team from the institute raised questions about the amount of teaching. There has been concern about the amount of time staff were spending on industrial contracts.

The institution has stressed that there has never been any intention to withdraw recognition from Sheffield.

A university spokesman said: "Following talks with the institution detailed discussions are now under way within the university about modifying the undergraduate degree course in chemical engineering and fuel technology. The outcome of these discussions will be reported to the institution next month."

## Arts graduates fare worse

Twice as many Oxford students reading arts as those reading sciences were still without a job six months after graduating last year, according to a report published this week.

The total unemployed six months after graduating from the university rose in 1980 to 4.7 per cent (11 students) from 3.8 per cent in 1979, the report says. This figure is still far below the national trend. There were 2,806 graduates in 1979.

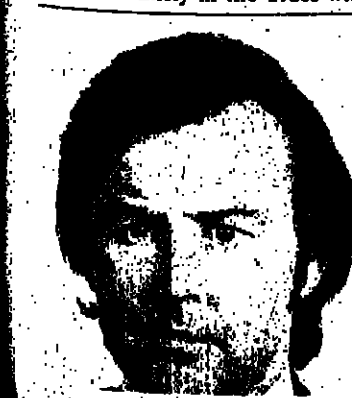
The report from the Oxford University Appointments Committee points out how selection procedures have become more rigorous. Whereas in previous years a student could reply to a question by saying: "Well I was rather hoping to hear something about it from you," today such a reply ends the interview.

Graduates need to devote themselves more keenly to discovering their employable skills, particularly arts students, the report says. Special numbers of courses, introduced last month in Cambridge, will begin in Oxford next year.

There were increases in the number of students going into commerce last year: (from 11.2 per cent in 1979 to 13.8 per cent), banking, insurance, accountancy up to 8.1 per cent, and the arts down to 12.2 per cent.

There were drops in those entering industry, from 14.4 per cent to 12.2 per cent, with 212 of the 303 graduates in the arts and social sciences, and those doing research, down two per cent to 17.8 per cent.

Reopen for 1979-80 University of Oxford Appointments Committee, 56 Banbury Road, Oxford



Do-it-yourself degree certificate

Geoffrey Lockwood, registrar and secretary at Sussex University will soon present graduates at a degree ceremony and then receive his own certificate - signed by himself. Under the university's royal charter he is the only person authorized to sign. At the ceremony in July he will be awarded the degree of doctor of philosophy, for which he worked while undertaking his full-time university duties - a rarity in itself.

Mr Lockwood's thesis was on the management of universities, using Sussex as an example. He is already author, with John Pickford, of the new standard text, Planning and Management in Universities.

The committee also ratified the establishment of links with the Department of Education and Science and the local authorities, as well as with the Advisory Committee for the Education and Supply of Teachers. Eventually it plans to develop channels of communication with the validating bodies responsible for awards at various levels.

## Plans to sever local links 'will hit students hardest'

by Olga Wojtas  
Scottish Correspondent

Plans to sever links between public sector higher education and the local authorities will promote "educational elitism," a leading official of the college lecturers' union warned this week.

Mrs Jean Bock, assistant secretary for higher education of the National Association of Teachers in Further and Higher Education, told a meeting at Balmers College, Berkshire, that the proposals were socially and educationally divisive.

"This can only be seen as a move by the Government to take over direct control of the higher education service to determine educational priorities and wield the axe more savagely," she said.

"The proposals will promote an educational elitism by separating higher education from further education and concentrating higher education in a small number of institutions."

## Training links forged

The Standing Committee for the Education and Training of Teachers has approved the setting up of informal links with the University Council for the Education of Teachers with a view to eventually establishing joint machinery for the training and education of teachers.

Students would find it more and more difficult to get on to course, might have to travel further afield, and might fall altogether if the subject of their choice did not conform to Government priorities which narrowly defined courses to the needs of business or industry.

Teaching staff were already faced with Hobson's choice over redundancy or voluntary retirement, she said. Worse was to come with the threat that one in six lecturing jobs would disappear by 1984.

"This is not merely a loss of future employment opportunities for our members but another loss of opportunities for future students," she said.

Mr David Aaronovitch, president of the National Union of Students, told the meeting that the challenge of the future demanded resources to educate not only scientists and technocrats but arts graduates.

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## Co-op movement faces jobless challenge

from Clive Cookson

WASHINGTON  
Cooperative education, sandwich course, practice school, *estagio*, *alternance*, *berufshandwerk* are just a few of the terms used in different countries to indicate programmes and institutions that combine academic studies and work experience. Such words were echoing around the halls and corridors of the Boston-Sheraton Hotel last week from the thousand delegates attending the second world conference on cooperative education.

Northeastern University, America's leading institution of cooperative education, organized the meeting to follow up the first world conference on sandwich/cooperative education, which Brunel University put on in May 1979. The Boston conference attracted educators from 30 countries, including 50 Britons, who were anxious to extend the contacts they made two years ago. Mr Alan Daniels of Brunel, organizer of the first conference, said his meeting had made institutions practising cooperative education in different countries aware of each other's existence, and had represented the first step toward a permanent world organization. The Boston conference concentrated on coordinating cooperative education's "challenge to the established order", as Northeastern University president, Dr Kenneth Ryder, put it.

Dr Ryder announced at the end of the conference that Northeastern, which has nearly 10,000 co-op students, as they are known in the United States, would provide a temporary secretariat for the growing worldwide movement. By the time the Third World conference on cooperative education is held at Australia's Swinburne Institute of Technology in 1983, a permanent international organization should be in place.

There was no mistaking the feeling among participants at the Boston conference that they are riding one of the strongest educational waves of the 1980s. As outside speakers such as former British education secretary, Sir Shirley Williams, told them: World-wide expansion of cooperative education is essential to achieve a closer marriage between the increasingly separate worlds of education and work.

On the one hand are "frightening" levels of unemployment among 16 to 24 year-olds, said Mrs Williams, who was representing the Organization for Economic Cooperation and Development (OECD). Unemployment rates in this age group range from 14.5 per cent in the United States to 30 per cent in Italy and 35 per cent in Spain. And among disadvantaged minorities, such as urban blacks, the figures can reach 40 to 60 per cent.

\*Figures of 40, 50 and 60 per cent



Labour's former education secretary Mrs Shirley Williams, listens to UN under secretary general, Mr Davidson Nicol (left), and Mr Kenneth Ryder, president of Northeastern University.

unemployment among young people in inner cities suggest the possibility of a breakdown of social trust and social order, which we have got to take more seriously than simply by building up our police forces in order to cope with the inevitable consequences," Mrs Williams said in a speech that was definitely the most warmly received of the whole conference.

"On the other hand is the inability of employers throughout the world to fill vacant positions for highly skilled workers. For example Professor Friedrich Edding of the Max Planck Institut für Bildungsforschung spoke of a large German company that was setting up its own education and training institute 'in conscious competition with the public system' because it was so dissatisfied with the products of the latter.

However while cooperative education, with its alternating periods of work and study, can bridge the gap between traditional education and employment, several participants warned against raising false expectations that it could actually increase employment. Only economic expansion could do that. "No educational vehicle alone can create jobs," said Joseph Shenker, president of La Guardia Community College in New York.

Another factor favouring the growth of cooperative education is "the major move back to conservative financing and to cuts in public expenditure in the western world," said Mrs Williams. "That is going to mean less employment in fields like public administration, education and health, the fastest growing fields of employment in Western Europe and the United States over the last 10 years, and in addition to going to mean pressure on the educational system to spend its shrinking resources more effectively.

The conference showed a clear difference of emphasis between participants from the United States and Canada and those from Europe, Africa and Latin America. In North America, with its system of mass higher education, cooperative education is seen entirely in the college and university context.

But many delegates from other parts of the world seemed to focus on the transition from school to work among the 16-19 age group. That was particularly true of participants from the German speaking countries - Germany, Austria and Switzerland - whose system of industrial training, based on a combination of apprenticeships and vocational education, was generally agreed to be the most advanced and successful in the world.

Davidson Nicol, under secretary general of the United Nations and former president of the University of Sierra Leone, said that in developing countries "there are certain barriers against adopting (cooperative education) at universities, stemming from the elitist concept." Cooperative education should not be confined to higher education because "three-quarters of the world's literate youth do not go to college."

Dr Nicol said: "Cooperative educa-

tion can be a binding factor in a nation building... cooperative education which sends students to different parts of the nation away from their community helps to unify that country and to enrich their personal experience apart from enhancing their technological skills.

In North America "co-op ed" has been growing fast for 20 years. In 1960 there were 20,000 co-op students at 65 colleges and universities; today more than 200,000 are enrolled at 1,100 institutions. The federal government has invested \$100m over the past 15 years in grants to give new programmes started, and co-op ed is one of the very few parts of the Education Department budget to have escaped President Reagan's cuts - British sandwich course representatives were hoping that Mr Reagan's friend Mrs Thatcher would take note of his belief in the concept.

Canada's Employment Minister Mr Lloyd Axworthy, told the conference that his department had just completed an internal review of cooperative education in his country. As a result, he was about to ask the Cabinet for a substantial increase in federal support for cooperative education in Canada. Northeastern University, which even has a co-op law school, has seen itself as a missionary for cooperative education, and its administrators have trained thousands of people from other institutions in the United States and Canada to start up their own programmes. Now it seems set to spread the co-op word right round the world.

## All the presidents' archives

by our north American editor

Fifty years after Jerry Ford went west to the University of Michigan on a football scholarship, the former president returned last week to dedicate the Gerald R. Ford presidential library at his alma mater.

The \$4.3m building on the University of Michigan campus at Ann Arbor is the seventh library built to commemorate a past president and to make public and private documents from administration available to scholars. All presidents since Herbert Hoover have been honoured with an official library except Richard Nixon, who built a Nixon library during his Watergate scandal, though they may possibly be revived if the slow rehabilitation of Mr Nixon's reputation continues.

Jimmy Carter certainly wants a library to house the papers - totaling an estimated 40 million pages - spanned by his presidency. Four universities in his home state of Georgia are competing for the right to build the Carter library. However it may not be located on a university campus at all. Sen. governor George Busbee has put forward a compromise plan, under which the Carter library would be the centerpiece of a new Great Park to be built in an abandoned land in Atlanta. But Mr Carter, who is relaxing and writing his memoirs, does not want to make a decision; his presidential papers lie safely in temporary storage in Atlanta's old post office annex.

The funds to build a presidential library must be contributed by private donors. But once it is established federal government pays all operating costs. Last year the National Archives and Records Service (NARS) spent about \$4m running the six existing presidential libraries, but President Reagan's budget cuts have not spared them. Next year they may have to reduce expenditure by 10 per cent, trimming back some of the lavish displays they offer tourists.

Mr Ford and his friends paid enough money - \$11.5m - to build not only the Ford library at the University of Michigan but also a Ford museum which is due to open in Grand Rapids, Michigan in September. The six previous presidential libraries have served as combined library-museums.

However Mr Ford was not satisfied with a single monument, because he wanted to honour both his home town of Grand Rapids and the University of Michigan, where he would still be remembered as a football star even if he had not become 38th president of the United States.

The Ford Library, a two-story brick and bronze-glass building, contains 15 million pages of public and private documents, a quarter of a million photographs and thousands of tapes and film tapes. The material should be an excellent source for modern historians.

The Gerald R. Ford Museum in Grand Rapids is aimed more at tourists than academics. It will display Mr Ford's personal effects and mementoes of his two-and-a-half years in the White House, including exhibitions about his wife Betty Ford and his vice president Nelson Rockefeller.

Neither the Ford Library nor the museum is likely to pull in nearly as many visitors as the John F. Kennedy library, which opened in October 1979. This architecturally striking monument overlooking Boston Harbour drew a million people in 1980, from tourists to academics attending public policy conferences.

The Lyndon B. Johnson Library in Austin, Texas, has also been popular with both tourists and scholars. The four older libraries - the Herbert Hoover Library in Indianapolis; the Franklin D. Roosevelt Library in Hyde Park, New York; the Harry S. Truman Library in Independence, Missouri; and the Dwight D. Eisenhower Library in Abilene, Kansas - have tended to attract more serious scholars than casual visitors, partly because they are located in the rather remote of the way places where the presidents grew up.

## Overseas news

## Forgery, bribes, exam-rigging rock Japan

from Martin Roth TOKYO

The new Japanese university year has begun with many of the country's colleges rocked by scandal. Six officials of Tokyo's Waseda, a leading private university, have been arrested for forging records and a seventh has committed suicide.

Other cases involved huge backhand payments by parents wishing to have their children admitted to private medical colleges. And health and welfare ministry officials have opened an investigation into the possible leaking of questions for the state examinations for medical school graduates wishing to register as doctors.

Most of those charged in the Waseda case were clerks in the commerce or social sciences departments, or at private secondary schools affiliated to Waseda. According to the indictments, the records of seven students were forged to help them pass various examinations.

A total of at least 10.6 million yen (£2,000) is alleged to have been paid by parents. The indictments relate to only seven cases, dating back to 1979. Police believe that similar forgeries have been carried on for 30 years, but the statute of limitations makes them unable to take further action.

Three alleged middlemen, who are said to have introduced "customers" to

### University year begins with arrests

the university officials, were also arrested in the same case, including a former professor at the university who was a member of Japan's Olympic committee.

Police believe that the forgeries began when he asked clerks to falsify the records of prominent sportsmen attending the university to help them pass examinations. At first only token payments were involved, but the forgeries later turned into a major business.

The scandal broke just two months after the Tokyo district court gave prison terms of 20 to 30 months to four men convicted of stealing Waseda entrance examination papers and selling them to parents of prospective students.

The *Yomiuri Shinbun*, Japan's largest daily newspaper, commented: "Some of the students implicated in the latest case did not know of their involvement. They, in a sense, became victims of the actions of their parents, who failed to realise that their odd intentions were illegal."

The scandal involving the private medical schools came to light in February. It first concerned Kitasato University in Tokyo, which was found to have concealed in secret bank accounts

3,251.5 million yen (£7.1m) in off-the-record contributions from students' parents.

Like most private medical colleges, Kitasato demands that parents of prospective students pay huge amounts before their children can be admitted, in addition to the normal tuition fees. The education ministry permits contributions from parents of up to ten million yen (£22,000) per student, at the time of enrolment, on the condition that the donation does not influence the university's decision on admission.

But it is believed to be a common practice at the private medical colleges to admit students according to donation.

In Kitasato's case, the money collected averaged 22 million yen (£48,000) per new student during 1979 and 1980. Following the disclosure, the university returned the money, and the president of the board of trustees, as well as all 18 trustees and the head of the medical department, resigned.

Another university, Hokuriku, in Kanazawa on the Sea of Japan, was found to have collected 3,750 million yen (£8.2m) in off-the-record donations over two years. This university, like Kitasato, was ordered to repay

large government subsidies.

In a series of articles on these and similar incidents, the *Maiichi Shinbun*, another large daily newspaper, said the colleges themselves do not suggest to parents that they make large gifts. Instead, word is quietly passed by alumni associations.

The methods of payment are kept secret, but intermediaries are used including, in many cases, politicians' secretaries, said the newspaper.

Following these scandals, the ministry of education carried out a hurried investigation of the 29 colleges, and learned that only eight did not collect large donations from parents this year.

The more prestigious state-run universities, where tuition is virtually free and admission is strictly by competitive examination, pride themselves on being above the taint of dirty money.

But in mid-April newspapers revealed that questions in the final university examinations at the medical school of Yamaguchi University in Western Japan were in many cases identical to those in the national tests in early April for medical graduates seeking to register as doctors.

The same prominent professor had prepared both examinations, and he explained that urology is a narrow field with little scope for a wide variety of suitable questions.



## Zimbabwe plans two new faculties

The University of Zimbabwe is planning to establish faculties of mining engineering and veterinary science by the start of the next academic year to meet the country's demands for expertise in these fields. The rapidly expanding university has already opened faculties of agriculture and commerce and law this year.

The plans were announced by Professor Walter Kumbira, (above) the university's principal designate on his return from a tour of Australian universities which he hopes will provide lecturers on an exchange basis for the two new faculties.

At present the only veterinary facilities in the region are in South Africa.

## All-women colleges make a big comeback

by Fred Hechinger

Women's colleges have not only survived the coeducational competition but have emerged stronger. A nationwide study of these institutions shows that they are attracting greater numbers of applicants - 4 per cent more than last year - and are perceived by their students and faculty as outposts of female leadership. In the past decade, their total enrollment has increased by 15 per cent, to 101,000 up from 88,000. These findings stand in sharp contrast to the situation that the women's colleges faced ten years ago and to the predictions that they could not survive. Their end seemed at hand, at the time when most formerly all-male colleges began to admit women.

Most of the 118 women's colleges were founded in the nineteenth century to give young women a chance to go to college when the majority of campuses were reserved exclusively for men. Why would young women today, in the wake of the sexual as well as the feminist revolution, choose any longer to spend their undergraduate years in all-female isolation?

The report, *A Study of the Learning Environment at Women's Colleges*, by the Women's College Coalition, a nonprofit advocacy group, supported by the Ford Foundation, cites women's college presidents and faculty members who describe their mission as

"providing a supportive atmosphere for women, encouraging women to take leadership roles, develop self-confidence and self-respect, and fight stereotypes." Their students are more likely to major in areas that traditionally have not attracted women, such as science and mathematics.

While most of the former all-male institutions that have gone co-ed are still run by men, the study shows that in women's colleges "women are present in significant proportions throughout the power, reward and prestige systems." For example 51 per cent of the tenured faculty and 71 per cent of the presidents are women.

Almost half of all the college trustees are women, while women remain a tiny minority on all other college and university governing boards. Dr Martha Church, president of Hood College in Frederick, who presided over data collection for the study, said: "Sixty-year-old gentlemen see men as safer bets."

At women's colleges, the study found, faculty members, men as well as women, "are significantly involved in activities directed toward the full curricular recognition of women." For example, 84 per cent of the faculty members who responded reported that in the last year they had added substantial material to their courses.

Other findings include:

considered it their mission and that of the colleges to raise women's aspirations; 75 per cent of the women and 66 per cent of the men want to develop assertiveness, ambition and leadership in their students; 72 per cent of the women and 66 per cent of the men want to make their students aware of the full range of roles and opportunities open to women;

More than 90 per cent of the presidents agreed that women's colleges inherently recognize the contributions and concerns of women in more subtle ways than through separate women's studies;

Of the presidents, 81 per cent believe that male faculty members at women's colleges are more likely to develop an affirmative attitude toward women's intellectual abilities than those at coeducational colleges;

Of the faculty, 80 per cent of the women and 73 per cent of the men

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## Reagan names space heads

President Reagan has chosen business executive James Beggs to head the National Aeronautics and Space Administration (NASA). His deputy, named simultaneously, will be Mr E. M. Egan, who served as secretary of the air force in the Carter administration.

Both nominations had been expected for several weeks and were generally welcomed by scientists involved in the space agency. They must be confirmed by the Senate but no opposition is expected.

Mr Beggs, the new administrator, served in the Nixon administration as associate administrator of NASA and then undersecretary of transportation. Since 1974 he has been executive vice president for aerospace at the General Dynamics Corporation, a major defence contractor which is currently building the F-16 fighter and the Cruise missile for the Pentagon.

Dr Mark A. German-born physicist and nuclear engineer, was director of NASA's Ames Research Centre before he joined the Carter administration. First as undersecretary and then secretary of the air force. He is one of the few senior members of the Carter Administration to be given a job.



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## Alan Franks talks to Shakespearean scholar Sam Schoenbaum about his obsession with the Bard

For a man who claims to have been "sorely stiff of poking around with Shakespeare," Professor Sam Schoenbaum hasn't done too badly.

The apprehension was there because the Bard's poorly defined life had attracted so many would-be chroniclers; but 30 years and an eternity of library hours later that fear has given way to a huge sense of relief. Only the curiosity remains as feverish as ever.

After all, posterity has been badly served where Shakespeare's life is concerned. Or so it has always been thought. In his day the literary breed was not deemed worthy of the biographer's attention. John Donne may have been a poet, but had he not also been dean of St Paul's, his image would have remained similarly obscure.

Last month Schoenbaum was in London for two days for the launching of his new book, *William Shakespeare: Records and Images*, £38's worth of documentation on everything from "eye witness accounts" of the plays to the often farcical history of fake portraiture.

He was jet-lagged and stemming slightly from a TV recording which had only allowed him three minutes to dispute claims that the plays were not the work of Shakespeare. That must have been a trial for such a garrulous Bronx boy, but in a pub across the road from the British Museum he was making up for it.

"You want to know where it all started, this obsession? I'll tell you. It was back in my youth. I was 17 and at school in the Bronx, which was then a lower middle-class urban area. I was in a special English class and we were taught by Mrs Talmach. Please mention Mrs Talmach because I owe a lot to her. Normally we got taught *Macbeth*, but we were bright so she gave us *Hamlet*. How do you like that? We were good, so we got more work. Then I heard about *Othello*. The famous Paul Robson production was in town and I asked a girl in the class for a date. I can remember that show as though it was last week. The sets, everything. That's where it all started. I went second time. With the same girl. I married her."

Schoenbaum talks demonstratively, with sweeping arm gestures and much movement of the head. The hair and beard are silver, and the voice somehow strident and fat at the same time. He quickly has an audience. Second to Shakespeare he is the best advertisement for his work, with a contagious enthusiasm; conversely, the book seems to be a very good index of the man. Both are out to tell a rattling good yarn which must not be doubted by buckethfuls of scholarship but made to glow all the more brightly.

If you didn't know better you might take him for some globe-trotting thriller writer always in search of an ending. In a sense he is just that. His hero, of course, is long dead (in circumstances which nobody knows), and the passage of time, far from helping to shed light on the truth, has buried clues and perished evidence.

He is now considered to be the world's foremost authority on Shakespeare documentation. *Records and Images*, which is a complementary volume to *A Documentary Life* (1975), collates another 160 documents, many of which have never been reproduced before. It is a fascinating storehouse of affidavits, counterfeits, depositions and the like, touching in some way on the world in which Shakespeare moved. Ten years ago he published *Shakespeare's Lives*, praised by Michael Foot as "the book of the decade".

One cannot help wondering what Bernard Shaw would have made of it all. It was he who said that extant evidence of the playwright's life could be summarized within "a half-hour sketch".

"Show within concisely!" is Schoenbaum's wry come-back.

What we get in this latest tome are scrupulously pieced together stories of their own, in which Shakespeare was often the latest walk-on. There is the case that came before the Court of Requests, which turned on the legality of the marriage contract of Stephen Belott and Mary Mountjoy. It was in one of the houses owned by Mary's father, in Cripplegate, that Shakespeare, on his way to becoming a man of means, had lodgings for a while. He was called upon by the court

## Will and testament



to confirm that he had witnessed the truth-plight between the parties, and his signature to that effect provides us with only the sixth of undisputed authenticity.

Then there is the most foul-sounding murder of a woman by her father, William Bott, a former occupant of Shakespeare's Stratford home, New Place. We learn from the evidence of a shoemaker, one Roland Wheeler, that the luckless victim "did dye suddenly and was poisoned with rattlesbane and therewith swelled to death". And all this not long before Shakespeare moved in. Could this have been the original "evil that men do" living after them? Was it indeed a model for the Claudius crime?

There is the Addenbrooke suit, in which the playwright goes to the Stratford Court of Record to retrieve £6 from his debtor, and the Welcome Enclosure, with Shakespeare's compliance being sought by the powerful landowners of the neighbourhood.

These are the barest bones of episodes which Schoenbaum has fleshed out, each to several pages, through porings of incredible diligence. It is all a far cry from the approach of an E. M. W. Tillyard and the preoccupation with an Elizabethan World Picture. Schoenbaum is not after the zeitgeist of his subject's lifespan, nor is he particularly concerned with the lives in the affairs of men; the national mood of expansionism or the ascendancies of Church and State. It is as though he has found himself in the grandest of English stately homes, and while most of the party are looking up at the statues he is busy turning out the dustbins.

Sometimes the bits of paper which he lovingly straightens out lead him onto paths so tangential to the circle of our main concern that the tangent itself becomes the obsession. So the question arises: why? Why all this assembling of peripheral tales, many of which have their own gaps anyway?

"OK. You may say about the Belott Mountjoy case for instance. But look here, this guy was just a bystander. What the hell does Shakespeare's genius have to do with all this? My answer is that the materials of life, particularly the kind of life that interested Shakespeare, are very very ordinary. His achievement was the

magnification of the ordinary to the extraordinary. There's no truth at all in the notion that to write about the things he did you need to be of the nobility, or somehow high-minded. I mean, how on earth do you write all those tavern scenes and create the Pistols and Bartholoms and all the rest without having been in there among it all? What interests me is the prose of Shakespeare's life, which he metamorphosed into poetry."

Nonetheless, it is not in Schoenbaum's brief, not in this latest book at any rate, to speculate on the specific influence of the "prose" on the "poetry" — for example the Addenbrooke affair as the source of Shylock's pound of flesh. In his own words, "I don't editorialize much."

Something he is always ready to do is enlarge on that "ordinariness" theory. "There are obvious examples. Sure, Lear may be a king, but that's a play about retirement and inheritance problems. So you've got these daughters and you're getting old, and what're you going to do?"

Then there's *Macbeth*, clearly a favourite. Even the accent seems to broaden for this: "Look, it's about 'da boss coming to dinner. What's gonna happen? Will Macbeth get da promotion? To get promotion he's gotta bump da boss off. It's a sitcom. Sure, a bit black, but it's sitcom. Dinner is followed by insomnia and indigestion. It's bourgeois. It could almost be *The Death of a Salesman*."

Less easy to accept is Schoenbaum's own claim to have "shed the afterbirth of all this" with the publication of *Records and Images*. The man is clearly addicted. The "big thing" now is an Oxford edition of Shakespeare, "with me as sidekick to Dr Stanley Wells". Besides which, he's under contract to do a *Critical Life*. In addition to this he is currently president of the Shakespeare Association of America and Distinguished Professor of Renaissance Literature at Maryland University.

There seems no way that he can drop the subject, or that the subject can drop him. Just two days before leaving for Britain, another "letter" by Shakespeare, surfaced, this one allegedly penned by the 26-year-old William on behalf of Southampton, the "poor" relative of the Earl of Northampton. "Maybe, maybe not," says a

phlegmatic Schoenbaum. "I'd really have to see it first."

He is nearly as passive on the matter of Dr Rowe, with whom some colourful disagreements on, among other matters, the Dark Lady, now seem rather distant and trivial skirmishes. "A. L. Rowe? I like A. L. Rowe. Let's drink to A. L. Rowe."

Now of all times he can afford to be as magnanimous as Agamemnon, for his achievement is colossal. A student now has access not to semi-legible facsimiles, but effectively to the documents themselves. Almost all have been reproduced life-sized, with a clarifying text when needed, as well as spreads that fold out of the page to double the area. Even those who don't share his sense of mission have to concede the value of the compilation.

For the non-believers it is not enough, and never will be, any more than a carbon-dated Turin Shroud would eradicate non-Christian religions. There remains the ardent Baconians, Oxfordians and Marlovians, not to mention the "Jesuit collective" school and dead sceptics like Freud and Mark Twain. It was against spokesmen for the first three persuasions that Schoenbaum had found himself pitted in the studio that afternoon, suddenly a dissenting voice for believing that William Shakespeare was William Shakespeare, and none other.

He need not have worried about his short rotation of air time with an opposition moreover, which kept leaning on interpretive rather than circumstantial support for their beliefs — the very reverse of Schoenbaum's practice.

There are two other areas in which he might find himself outvoted: first his refusal to accept the traditional wisdom about the scarcity of relevant documents. "People do say: 'Hey, but there's so little to go on.' Well, these things are relative. Given the period there is relatively quite a lot of stuff. It is actually quite extensive. No, the problem is not quantity, but quality. Second is his belief that despite *Records and Images* there is probably still much more material to be studied. "My book is thorough, sure. But definitive, no."

So what kind of document would represent a significant breakthrough? "Obviously one wants some more light

shed on the missing years, from 1585 to '92. One wants a personal letter of some kind. Also, is there a burial case-book somewhere, recording Dr John Hall's ministering to his father-in-law on his death bed? I have the fantasy about walking into a medical library. I don't know where, and there it is, on a shelf, and the custodian has no sense of its value."

Here that thriller writer in search of his last page seems to come to the fore again. "And then I'd like to find *Lord Labours Found*. A unique Quarto, if there is one. In Amsterdam, I pay £3.50 and maybe worry a little as I go through the customs. I know, I know. It's third pint talk."

One result of the lack of personal memorabilia is that others have had to fill the vacuum. There is no shortage of suspect hands and likenesses, more of them done for motives less pure than the supply of a demand which swelled after 1769, the year of Shakespeare's "coronation" as National Poet. The have both bedevilled and enriched Shakespeare study. To a positive thinker such as Schoenbaum they have only enriched, and two of the most acclaimed episodes in *Records and Images* concern the efforts of two very different forgers, William-Henry Ireland and John Payne Collier. The first was as hamfisted as he was prolific and the second was dangerously plausible.

The aim is always to fill his own frame as faithfully as possible, like the maker of a documentary (in the newer sense of the word). There is the main character, shadowy and recurrent, cropping up Hitchcock-like behind the common scenes of the day.

The common scenes and the everyday matters: these are at the heart of the hunt, however revealing they may or may not be. "We've only got one surviving letter, and that's to, not from Shakespeare. And what does Othello say in it? Not 'I loved the play, Will. No, he's on about 30 quid. 'Thy quid!'"

Perhaps the parallel of the thriller writer or the tourist in the statehouse are not the right ones for Schoenbaum, nor that of the film maker. More than any of these he is a unique archivist, almost physically so, pulling up the stones of standard constructions to get at the decomposing drainage underneath, and then deep digging.

The task has turned him into a polymath, as was Shakespeare. During the years of research his stock-in-trade has had to include calligraphy, legal history, the treatment of canvases, palaeography — any art or science that helps the past speak to the present with greater clarity. He must consider the probable bow of an h, the use of the Italian form of long s in the medial position, the relative influences of the court and secretary styles on the handwriting of the day. It makes a good illustration of the maxim that a discipline advances through activity at its very edges.

Since all Schoenbaum's towers, lead back to Shakespeare's tower, what kind of person was he? Does the "gentle" epithet stand up? Was the playwright Edward Bond's characterisation in *Bingo*, which has Shakespeare conniving with the "come enclosers"?

"Not the second, certainly," says Schoenbaum quickly. "We cannot, for example, pick up the Addenbrooke story and say: 'This guy was in litigation.' All he was doing was using in accordance with the custom of the time. That's important."

"In a way I feel too close to the subject to know. I respect 'gentle' as about right. Gentle and friendly. All his way of life in the theatre was collegial. He was not just an actor and writer; he was an administrator and a like very few others. Mollifier or pacifier. Getting on was an essential part of the game. But the one I'm hunched to provide: a framework for the post-Robbins era. Government initiatives have looked at segments of the system, like technical training, or minimal technicalities, or the funding of the polytechnics."

To fill this policy vacuum the Leverhulme inquiry intends to spread its limited resources over a wide front, tackling not only the problems of cuts and rationalization but also the less tractable ones of higher education's relation to industry.

William Shakespeare: Records and Images by Sam Schoenbaum (Penguin Press), £38.00.

## Peter David looks at the Leverhulme inquiry programme

## A long haul in the wake of Robbins

Early next week about 40 academic, politicians and administrators will meet at Sussex University's Isle of Thorns conference centre to inaugurate an inquiry that could become as much a landmark of British higher education in the 1980s as the Robbins report in the 1960s.

Sponsored by the Leverhulme Trust and directed by Mr Gareth Williams, professor of educational planning at Lancaster University, the programme aims to produce a comprehensive report on higher education policy through the second half of the decade and beyond.

Its organizers, the Society for Research into Higher Education, see the Leverhulme inquiry as a British counterpart to the Carnegie investigations in the United States — although, with a slender budget of under £100,000, on a much smaller scale.

What it lacks in resources, the Leverhulme inquiry may be able to make up for by its delicate sense of timing. It is being launched at a time of unprecedented confusion in higher education, when both politicians and institutions are searching for a clear vision of its future. Its final report should be ready in 1983 at precisely the right moment to influence the thinking of a new government.

The confusion in higher education is not just a product of the cuts. The enquiry's planners began work long before the tenacity of Mrs Thatcher's spending plans became apparent or even predictable.

What spurred them into action was the crisis behind the cuts described by Professor Williams as a loss of confidence in higher education by its users, its providers and the academics who work within it.

Perhaps the most important corollary of confidence is the knowledge that next year will be the demographic peak for universities and colleges, when the number of 18-year-olds will top 941,000 before starting the long descent to 622,000 in 1999.

Combined with a persistently low participation rate the demographic plunge can only spell the contraction for higher education, acknowledged by the former Labour Government in its two discussion documents published in 1978 and 1979.

Confidence has also suffered because the system has been running out of steam. The resources and energies unleashed by Robbins in 1963 have been used up and the planning projections contained in the Robbins report end this year.

Since Robbins the system has changed out of recognition, teetering in size and seeing the birth and growth of the polytechnics. Over that period, no government or independent enquiry has been launched to provide a framework for the post-Robbins era. Government initiatives have looked at segments of the system, like technical training, or minimal technicalities, or the funding of the polytechnics.

To fill this policy vacuum the Leverhulme inquiry intends to spread its limited resources over a wide front, tackling not only the problems of cuts and rationalization but also the less tractable ones of higher education's relation to industry.



Professor Gareth Williams leads a band of enquiry convenors. and its structure and government.

Participation at the seminar in Sussex next week are likely to share the conviction of the organizers that an inquiry is overdue, but many will nurse secret suspicions that the scale of the task will prove too great for a programme of such limited means.

The shape of the inquiry is too unconventional and rather less grand than envisaged by the small group which gathered around Professor Williams to plan it. Originally thought to be given to the creation of a higher education policy institute and then to the idea of an inquiry commission on conventional lines.

A long search for a sufficiently eminent person willing to chair such an investigation was unsuccessful. The format of seminars backed up by brief research papers eventually adopted was the result of this failure and the equally important failure to secure funding beyond the £85,000 offered by Leverhulme.

The absence of a permanent chairman is bound to impose a heavy burden on Professor Williams and his small band of convenors who will be responsible for drafting the all important post seminar reports.

Loan finances have forced the organizers of the Leverhulme programme to adopt an unconventional format for the enquiry. A series of eight specialist seminars chaired by eminent industrialists and attended by about 40 invited participants will culminate in the summer of 1983 in a final report on higher education policy for the 1990s.

Participants in each seminar will be provided with a number of specially commissioned research papers on each theme. Summaries of the papers, together with a report of each seminar, are to be published in *THE TIMES*.

The main programme timetable is set out below: MAY 12-14: Seminar on higher education and the labour market, chaired by Sir Michael Cusack, deputy director of Lloyd's Bank. Seminar convenor will be Dr Robert Lindley, director of the Manpower Research Group, University of Warwick.

JUNE 29 - JULY 1: Seminar on demand and access to higher education, chaired by Sir Adrian Cadbury, chairman of Cadbury Schweppes Ltd. Convenor Oliver Fulton, Lancaster University. SEPTEMBER 21-23: Seminar on institutional adaptation and change, chaired by Sir Alastair Pilkington, FRS, chairman of Pilkington Brothers Ltd. Convenor Professor Leslie Wagner, Polytechnic of Central London.

SPRING 1982: Seminar on the research function, chaired by Mr Ken Durham, vice-chairman of Unilever. Convenor Mr Geoffrey Oldham, Science Policy Research Unit, Sussex.

SPRING 1982: Seminar on the teaching function, chaired by Sir Bruce Williams, director of the Technical Change Centre. Convenor Dr Donald Bligh, University of York.

SUMMER 1982: Seminar on mechanisms of finance, chaired by Sir Kenneth Borlase, chairman of Vickers da Costa Ltd. Convenor Mr Alfred Morris, deputy director

## The lost generation of university wealth

## Ngaio Crequer looks at the pros and cons of graduate fundraising

During the last year a small group of people have been surveying ways past graduates are helping universities to raise funds.

The group are all officers or members of the Conference of University Conventions and their study arose from anxiety expressed during its 1980 annual meeting about the state of university finances.

They approached the Committee of Vice-Chancellors and Principals to ask the best way they could help, and the study was a result. They hope to have a report ready before the 1982 conference, in which they will show how convocations have helped in the past five years, and where they can help in future.

The role of past graduates as a lobby for the universities and as potential fund-raisers is quickly being realized. Recently the vice-chancellors of Aston and Sheffield wrote to former graduates asking for financial support. Sheffield said it could no longer help students in hardship because of cut-backs in its grant.

At Aston, the vice-chancellor, Professor Frederick Crawford wrote to suggest setting up a "Volunteers for Aston" group from graduates, to help to make the university's contribution to society known, and to raise support for it.

Professor Crawford, addressing the convocation conference suggested that it was the best avenue for promoting universities, understanding their value, and for spreading their views among the informed public. A previous Stanford University man, Professor Crawford is used to the involvement of alumni organizations as fund-raisers.

It may well be that university convocations will find a new and more positive role. In most cases they are constitutional bodies with a defined existence but vague role within the university.

Normally, all students become members of convocation upon graduation and in this sense "become" the university in the very widest sense. On paper at least convocation links past and present students. In most cases, graduates who wish to keep in contact, at least to the extent of being informed of recent events, will pay an annual fee to cover registration and mailing costs.

The small number of people who want to take a more active part will attend regular meetings in towns and countries well removed from their home institutions. Manchester, for example, has a group in West Africa, as well as in London and half a dozen other British centres.

The role and responsibilities of convocations are the vice-chancellor's report and of some wider issues of principle, such as university investment in South Africa, or university honours to traitors (as in the example of Anthony Hunt, which was discussed at London).

At Aston convocation annually receives the vice-chancellor's report and the audited accounts and under the charter "shall have the right to discuss and to express its opinion to the council or the senate upon any matter concerning the working of the council." It also has the function of appointing the chancellor of the university although in practice this means that it confirms the joint recommendation of senate and council.

Convocation also elects three of its number to council and its representatives sit on many university committees. The London University convocation has discussed any matter relating to the university and declare its opinion thereon to the court or to the senate. The chairman of convocation is, ex officio, a member of senate.

At Liverpool there are members of convocation on council, court and other committees. At Sheffield they requested a seat on the appointing committee for the vice-chancellor although the request narrowly failed to win support.

As many meetings of the active participants in convocations are usually small there is a tremendous opportunity for people from all walks of life to retain a high degree of interest and

involvement in current university government.

These people are elected by convocation but they could not be held to be truly representative because convocation is such a large and mainly dormant body. But it may be argued that these representatives have the same justification for their presence as many of the lay members of university council who play a similar role in university governance.

They also perform other valuable functions. Many hold their own careers fairs, different from university careers and appointments meetings, and which consist of former graduates telling present students about their professions and disciplines.

At Salford University each department has nominated a liaison officer to keep contact with past students. At Salford and at Bradford convocation members help find industrial placements for students.

The Conference of University Conventions represents graduates from 17 universities. Aston, Bath, Birmingham, Bradford, Bristol, City, Exeter, Leeds, Leicester, Liverpool, London, Reading, Salford, Sheffield and Southampton. Sussex and Essex have expressed interest in joining and Manchester and Hull have been participants in the past.

It is a very English organization although recently one Scottish university has shown interest and so have its last meeting it passed two motions on cutbacks in spending and overseas there was a university but the association continued though this was abolished in 1949.



Anthony Hunt's professorship came under London University scrutiny.

Up to last year its action was always constrained by its constitution which enabled any member to veto any proposal. Vetoes were frequent because there was always one or more convocation — often London — which under its own constitution could only report within and to its own university.

The new constitution has dropped the veto provision, widens the definition of convocation and allows the conference to take a general view, although individual bodies can disassociate themselves from any decisions.

Although in no sense party political, political decisions as they affect higher education and as universities' actions reflect upon the local community. At students which will eventually be forwarded to Government, MPs, university bodies and unions.

The vast majority of graduates know nothing of their own convocation and many might not be interested. But it seems clear that if the universities continue to feel harassed by Government and drastically short of funds, this is one body that has yet to be tapped. Graduates may expect to hear from their universities in the future.



In his continuing series on the popularisers of science, Robin McKie talks to the veteran broadcaster David Attenborough.

## Life on television

Interviewing David Attenborough can be a tricky business. Not because he is a reticent or difficult man. Quite the opposite, in fact, for he is a naturally direct, entertaining and enthusiastic storyteller. Unfortunately this means conversations are frequently diverted down amusing sidetracks with tales of his early life, his days at the newly-launched BBC television service and his time as controller of BBC2 TV.

David Attenborough in love with his work

Indeed, it is all too easy to forget that the man who so captivated audiences with his boyish charm in the hugely successful TV series *Life on Earth* is one of the most experienced broadcasters in Britain and at 54 cannot wait to become a grandfather.

Yet his real passion is communicating and bringing to the small screen an enthusiasm for the living world that he so enjoys. It is partly due to the actor in him, he believes. His father, Frederick Attenborough, was an inspired teacher (who later became principal of University College Leicester) and that profession has "more than a touch of theatricality about it". And of course, there is the connection with his actor-director brother, Sir Richard Attenborough.

In fact, David Attenborough makes much of the importance of his early family life. "All children are naturally interested in living creatures from frogspawn to birds' eggs," he said. The additional factor in his case was the help of his father who encouraged him to do his own investigation and find out things for himself.

When Attenborough tried it out himself as a 17-year-old relief teacher in 1943 at a Leicester slum school, his importuning of children to bring back their own fossils resulted in a cavalcade of everything from lumps of tarmac to dead mice and a stuffed owl. Yet he remained quite touched at the enthusiasm - if nothing else - of a set of kids who were "as tough as hell".

It was a similarly sobering experience for him during his national service in the Navy, which he took after his Cambridge Part One in mineralogy, geology and zoology, when he taught young sailors his own age to simply read and write.

Strangely, Attenborough spurned further study and rejected the opportunity to do his part two at Cambridge, "because I wanted to get married and I wanted to earn a decent living." It is a decision he now thoroughly regrets.

"I am haunted by the fear that real scientists have got a secret that I don't know. I have never done research and I feel that someone who has made a discovery, no matter how small, entirely by himself and has gone through the intellectual processes involved has got an insight into the nature of knowledge that I don't have."

Writing scripts for scientific programmes sometimes gives him a hint of what might be going on, enough certainly for Attenborough to envy scientists their special awareness.

Instead he took a job as an editorial assistant in a publishing firm because he "had always been addicted to books." He spent a couple of years at this, putting commas in end of text, arranging illustrations for books and watching the clock on nearby St Paul's.

"I realized the job was simply not what nature had designed me to do and so I applied for an advertised post with BBC radio." Somewhat ironically the future controller of BBC2 TV did not even get an interview. It was only later that he got a letter from the BBC seeking young graduates to work in television - a decided reversal of the present stream of applications from graduates seeking work in TV.

He was offered only six months' security while being trained - and was about to turn this down when he discovered his new income would be four times his salary as a publishing editorial assistant. "I reckoned that at worst I could be 18 months out of work and still be no worse off, so I took it."

It was not until he got to BBC's primitive television studios at Alexandra Palace that he "discovered" the so-called training programme was no more than "a load of cobblers". Within weeks he was producing two of three programmes a week.

"Of course, the programmes were awful by today's standards but at least they were live. Terrible things hap-



pened - scenery fell down, people dried up on the air, everything!"

Yet those heady days gave Attenborough the widest possible experience in television, producing party political broadcasts, short stories, quizzes, discussions and now and then a science programme. However, he never appeared in front of the camera because, it was feared, his teeth were too big! "That was the pre-Raphaelite era of television, or course."

"It was a wonderful, exciting time to be in television. I know that sounds idealistic but in fact it was just that. At that time there were two separate types of animal programmes. Firstly, the kind in which creatures were brought into the TV centre to be bled and panned on the studio matts," and then there were the programmes actually shot in the wild.

Attenborough wanted to combine both, and so in conjunction with London Zoo, designed the Zoo Quest programmes in which animals would be filmed in the wild, captured and brought home to be recorded in the studio.

It was an exhilarating time for him and gave the 28-year-old his first real chance of adventure - taking him to West Africa, South America, and many other parts of the globe and introducing TV audiences to the now accustomed sight of the safari-suited Attenborough, slightly breathless with excitement, introducing some strange new animal or tribe.

That lasted 10 years, with a trip every year. It was then his curious nagging fear that science hides its secrets from all but its sacred priests became too much and David Attenborough resigned to do a part-time degree in anthropology - in part a response to his filming of increasingly remote and primitive tribes and peoples.

It was not to be, however, for in 1965 Huw Wheldon, who had clearly marked down Attenborough as his heir, brought him back to be controller of the newly launched BBC2 television, which was suffering a bad press at the time. "It was a good time to come in because I would get the credit for the matter how the channel got better just because of the timing."

It was another pioneering experience for him, for within two years he had to introduce regular colour broadcasts, the first in Western Europe. Much of this time was spent retraining eager production teams desperate to paint ceilings scarlet and floors blue to

## The boat comes in for Dr Hart

The prevailing mythology of the south has it that Sunderland is a rough, tough town, scarred by recession with not too much of what is called culture. It is all the more appropriate that the new rector of Sunderland Polytechnic, Dr Peter Hart, is a man who puts opera at the top of his list of passions, Wagner at the top of his list of composers, and has just asked for paintings from the art faculty to be hung regularly on the walls of his office.

Dr Hart is not a new face at the polytechnic. He has been deputy rector since Sunderland was designated in 1969, and has seen two other rectors, Dr Maurice Hutton, and Dr Ernest Freeman, men who built reputations for strong central leadership, come and go. There is little that Dr Hart does not know about polytechnics, even less that he does not know about Sunderland. Perhaps that is why he is introducing a deliberate change of style.

"There are more than 400 academics in the polytechnic. My most important job is to inspire them and persuade them," he said, looking around his office. His conversation is peppered with phrases like "man management", "maximizing potential" and "staff development" - common enough polytechnic vocabulary - but sounding slightly incongruous coming from Dr Hart.

What is apparent is that he is a very humane man, much liked by his colleagues, and whose real concern is people. In polytechnic terms this means providing the best possible training for all the 2,500 full-time students at Sunderland, and seeing them placed in good jobs that aid industry. This in turn means selling the polytechnic. "It's not for me to sit five days behind my desk. I feel these days directors have got to spend a lot more time outside their institutions. They have to project the polytechnic to people, to industry, to the region and even internationally," he said.

Polytechnics, he adds, are here to meet the needs and demands of industry, society and individuals. But these moves were taking Attenborough step by step from the job he liked most - making programmes, and so in 1972 he quit to return to an existence of writing and producing, although this time as an independent.

With a view from the outside, he can see the BBC's faults a little clearer now. "Nevertheless, there is absolutely no doubt that there is no country in the world with better television than ours - both ITV and BBC."

As for American television, that is simply a lost cause that reduces everything to mindless visual chewing gum and produces no expectation of anything that is intellectually stimulating or educative. "ITV is not like that because it is not competing with other commercial networks."

And Britain's new Channel 4? "I leave that to my brother who is vice chairman," he replied, although he acknowledged that it would have, like all new channels, an uphill fight at the start.

His own career will follow that success of his last major TV series, the lavish and exquisitely photographed *Life on Earth* which did for the natural world what Kenneth Clarke's *Civilization* did for art and Bronowski's *Ascent of Man* did for scientific thought.

It was a major showcase for colour television as devised by Attenborough during his days at BBC2.

"There are two ways to approach natural history. One by studying animals according to classes - amphibians, mammals, reptiles, etc. or by recording them in their various habitats - desert, ocean, mountain, etc. We did it the first way for *Life on Earth* and now we are preparing a second similar series which will do it by habitat."

If that proves to be anything like the success of *Life on Earth* - which sold 1.5 million hardback copies in Britain - none, and which is now available in paperback - then the BBC will have made a black-out of a series on their hands, and the British public will once again be "stunned" by an entertaining

Polytechnics, Dr Hart agrees, are facing the stiffest of challenges since their birth. Two weeks after he took over, demands to save some 21m from the polytechnic's budget for 1980-81 landed on his desk. This kind of cut reflects the new unpleasant age of contraction in which polytechnics now operate. But, Dr Hart argues, this does not imply stagnation. "More than innovation is the order of the day," he said.

He is proud of two innovations at Sunderland in the last decade. Firstly, the polytechnic has "balanced out" its profile of work. "Very early on we realized that the courses here were lopsided. Lots of sciences and technology but very little humanities." The Cowell who arrived as the rector in 1974, is now reckoned to hold his own with the other five faculties, much increased by the creation of a new faculty of pharmaceutical sciences.



Dr Peter Hart: Wagner lover

Pharmacy, along with glass-making, is a major industry of Sunderland, and Dr Hart wants the polytechnic to concentrate on that, as well as business management and engineering.

Secondly, Dr Hart counts Sunderland's success in persuading the Council for National Academic Awards to accredit a series of somewhat modern

and mixed courses as a major innovation. Here he lists courses in environmental studies, energy studies, materials science, and now sports studies. Jointly with Newcastle Polytechnic, and looking at the role of sport in society.

One route to "respite" in polytechnics, he believes, lies in the much discussed idea of a national body. "It has always been logical since the early seventies. Now it seems inevitable given the current phase of contraction," he said. What was essential was for directors to be able to run their institutions more easily. "What this does not mean is less local participation. With local authority representatives on our governing bodies, we can maintain and safeguard this local connexion," he said.

Dr Hart has already set about one of his earliest tasks, repairing relations between the polytechnic and borough council which while remaining in good health has been somewhat strained in recent years. The tasks ahead of him are to continue to change that image of Sunderland, and to keep the balance of high unit costs per student, which is among those polytechnics who lose most when promised housing reforms are imposed in the next year or two.

Dr Hart is a man of the old school who favours the vice-chancellor style of leadership, very popular where polytechnics were first designed. The book stops on his desk, but Dr Hart is out to sell the polytechnic and indeed sell the town which grows round it. He is the first to admit that he is a bit of a salesman. "I believe in decision-making. Dr Hart believes in decision-making in a period of contraction. He has already selected a very able lieutenant in Dr Ray Cowell, just appointed deputy rector at the age of

Paul Flather

## Why Carlyle should be living at this hour

At a time when unemployment in Britain tops 10 per cent of the workforce, with worse undoubtedly to come, it is not easy or perhaps even ethical to say that economics isn't everything. But not only might we wish to affirm this as a matter of preferred values; we seem in many ways to be forced to look "beyond economics" to examine issues of culture and social values, by the very intractability of the economic problem in Britain. Most people seem to feel that what we need is a new Keynes, and find him now in a Kaldor, now in a Friedman or Hayek. Is it so fanciful to think that what we might be in need of more is a new Carlyle or Arnold?

In this year's budget speech, the Chancellor, Sir Geoffrey Howe warned the Commons that "a 20-year economic decline cannot be reversed overnight." If only it were no more than 20 years! There might then be some hope of reversing it by deploying the usual fiscal and budgetary instruments that have been the common regulators of the economy since the 1930s. But how to reverse a 100-year decline? For that is the reality. All the evidence shows that Britain has been losing out to its industrial competitors since the last quarter of the nineteenth century. And this has not simply been due to technical negligence of such things as technical education and technical innovation. Ironically it is the result as much of British success as of British failure. In the second half of the nineteenth century, Britain began the process of world industrialization of which it was the first victim. British capital developed overseas markets for British goods, built railways all over the world, stimulated foreign enterprises to provide the necessary imports for her industry and her growing population. In time these other countries, such as Germany and the United States, moved from being dependents to being competitors - to being suppressors. Exports of British textile machinery from Lancashire engineering firms helped destroy the neighbouring textile industries, which were slow to adopt the newer machinery, in these very same Lancashire towns. British agriculture was undermined by the cheaper grain production made possible in North America.

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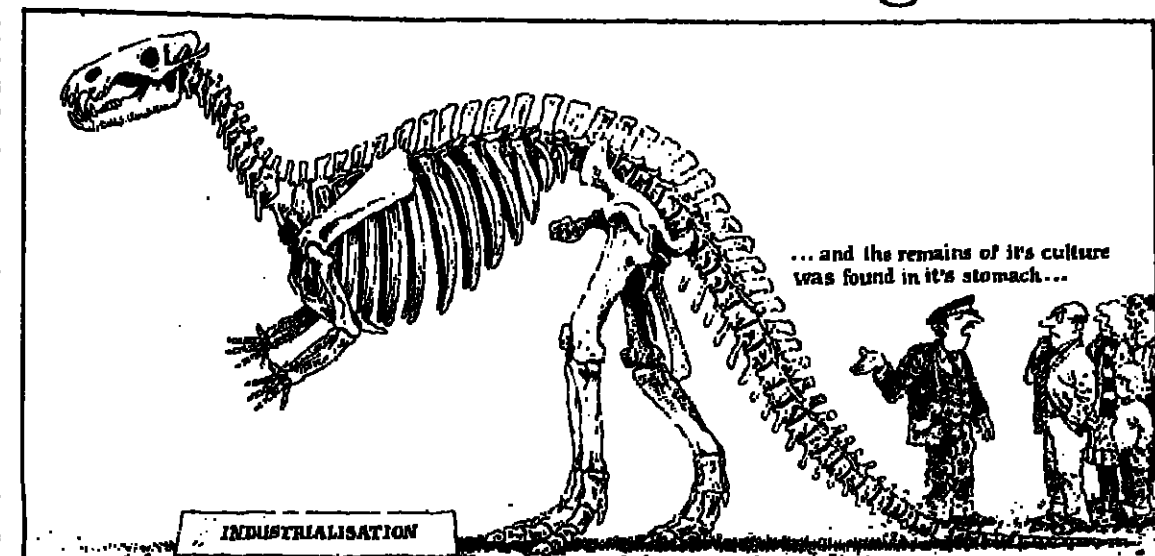
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Paul Flather



In the first of a series of articles on 'The British Disease', Krishan Kumar assesses the high price we are now paying for having been the first industrialized nation.



the dinosaurs, on the eve of their extinction.

Sensible people stop beating their heads against brick walls and look for other ways of getting to the top.

None of these things are written in the Destiny of Nations. But they are the plain facts of history, and follow a familiar logic (as Arnold Toynbee shows in his *Study of History*). Britain has seen many of its conditions, from the novel to cricket, taken over by other nations and developed to the point where the imitators surpass the inventor. So with the Industrial Revolution. It has now become the common property of world society. The inventor's patent has long since run out, with the inevitable result of a free-for-all in which the latecomers have the usual advantages of fresh morale and the latest weapons.

While Japanese factories have forward confidently to factories without any workers at all in the future, Britain records an absolute decline of fifteen percent in manufacturing production in the last year. North Sea oil just about pays the current unemployment bill, but oil production is already at its peak and we must expect diminishing returns from now on. So much for the hope that it would fuel industrial recovery. In any case, what historical precedents can people possibly have in mind when they talk glibly about "restructuring" British industry on the basis of necessity to compete effectively? Is it the sort of "restructuring" that took place in Germany and Japan as a result of Allied bombing during the Second World War? Otherwise, as well as talked about "restructuring"

Whitehouse-Longford axis. So long

Paul Flather

as the industrial machine spills out the goods, the question perhaps seems irrelevant, at least to the bulk of the population. But what when the machine seizes up and stops? What when government departments, not renowned for their extremity, predict three to four million unemployed next year? If we can't go on doing what we have been accustomed to doing all these past years, what alternative ways of making and having a life might there be? There isn't of course any one answer - that is the whole point - but the question at least can no longer be brushed aside.

That we are only too likely to get some very thin answers says something about the way cultural life has developed in this century. If we are searching for the roots of the present malaise, then changes in the social environment in which cultural questions are raised and discussed are part of the story. The significant developments here are a thoroughgoing centralization and institutionalization of cultural life. Compared with the last century, the intellectual and cultural basis has narrowed, geographically and socially, to the point where a highly selective and concentrated intelligentsia dominates the national culture.

Historical comparisons are never conclusive but they can be very suggestive. For present concerns it seems worth remarking that a good deal of the history of nineteenth century Britain - political, economic, cultural - can be written in terms of a tension between the metropolitan West End, or, in the case of the provinces, the London-based press and broadcasting monopolies. Northcliffe's ambition was for his newspapers, to build up a national readership "centring on London and looking to London for its news and opinions", has been realized in all cultural forms, all media. It is only in due acknowledgement of this situation that the Arts Council gives more than half of its total grant to London. No more can the blame Anthony Smith, director of the British Film Institute, when he axes the grants to six regional film theatres and gives the money to support a new cinema at the Institute of Contemporary Arts in London. As Smith says, "nothing gets to the provinces without a London launch. It's the best help to provincial audiences to see new work written about in the national Press."

The nationalization of British culture is simply a part of the larger process of economic and political centralization which has occurred in all industrial societies. But the degree of it, compared say to France, Germany, or the United States, is exceptional. So too with its institutionalization. The day of the "free-floating" intellectual is over. To exercise any cultural influence, now means to be employed or supported by a cultural bureaucracy, be it a university, a newspaper, a broadcasting company, the Arts Council or a local education authority. Dependency, however secure and comfortable, is the price for the leisure and opportunity to practice one's artistic or intellectual craft. This is true of any patronage system, of course, but the difference has to do with

the nature of the patron. Bureaucratic patronage consists of that kind of impartiality where success is possible for anyone whose face or mind fits, according to certain institutionally-defined criteria. It may not, in its general effect, be any worse than the system of personal patronage. But bureaucratic patrons, being few and large-scale, do differ markedly from personal patrons in the extent to which they are forced to select predictable clients, those who have already proved their success in the appropriate routines. There is no room in the system for that kind of diversity which, irrespective of the wishes of individual patrons, is inherent in the system of personal patronage. "Planned experimentation" the bureaucratic alternative, is no substitute and is in any case a contradiction in terms.

All this is familiar stuff, well-documented and frequently lamented. But few people seem to see its relevance to the current situation in British society as a whole. What it means is that at a time when there is most need for cultural initiatives, for a fresh examination of the values and direction of British society, there isn't an intelligentsia capable of undertaking the task. There isn't that variety of voices, based on different experiences, in different places, which is the pre-requisite for any genuine debate about the future of Britain. It is quite extraordinary to consider just how narrow the range of experience drawn on for establishing the goals and priorities of the society. London-based elites rule England, and through England the whole of Britain. What Marx once called "the absurd fable of Menenius Agrippa" has, in this United Kingdom, found a real embodiment: the belly swallows up the rest of the body politic.

The problem is not mainly one of geographical restrictiveness. In the strict sense, although that is an important dimension. It has perhaps more to do with a social and cultural exclusiveness. The metropolitan intelligentsia, sharing very similar social and educational experiences, is thoroughly at home with itself. It is the lineal descendant of that earlier "intellectual aristocracy" traced by Noel Annan, and characterized by him as "secure, established, and, like the rest of English society, accustomed to responsible utterance and sceptical of iconoclastic speculation." This may be a recipe for good manners, and no doubt makes for humane administration. But it seems hardly what is needed in these difficult times. Stasis is no condition to be in to see your way through a revolution. This may sound too strong, but it is hard to think of any other way of putting it, to express both the formidable nature of the challenge now facing British society, and the formidable obstacles in the way of any hopeful response. Britain, led the world into the industrial age, and is now suffering acutely the penalties of being first. Perhaps it wasn't necessary that this should be the case. Perhaps something could have been done, in the course of the past century, to "modernize" British industry and British cultural attitudes, in keeping with the general advance of industrialism. But this wasn't done, and it seems vacuous to blame people now for not showing qualities they were never taught by their society (and for which they were scant-rewarded if they happened to develop them by accident). The important thing now seems to be to discover what the existing strengths of society are, what alternative traditions can be rescued and built on. This is in the broadest sense, a cultural task. The irony is that the very success of the first phase of industrialism in Britain has made this a peculiarly difficult task. It has brought into being a structure of society which makes us very poorly equipped to think about the next, post-industrial, phase.

The author is a senior lecturer in the department of sociology and social anthropology at the University of Kent.



# Disturbing thoughts about thinking

It may be time we challenged the complacency with which we regard our intelligence, our concepts, our thinking habits and our academic institutions. Although this view is personal it is much more widely held than most academics might realize. Over the last three years I have been holding a series of discussion meetings (funded by the Comino Foundation) that have focused on the thinking required in different fields. To these dinners have come the chief executives of the major corporations, the nationalized industries and the media; there have been heads of Civil Service departments and leading politicians in both Government and Opposition; there have been judges, philosophers, artists, architects, designers, economists, engineers, inventors, physicists, chemists, doctors, management consultants, computer scientists, system designers, publishers, journalists, cartoonists, industrialists, entrepreneurs, bankers and psychologists. What emerged was that we knew very little about thinking and that outside a few areas our thinking needed a great deal of attention.

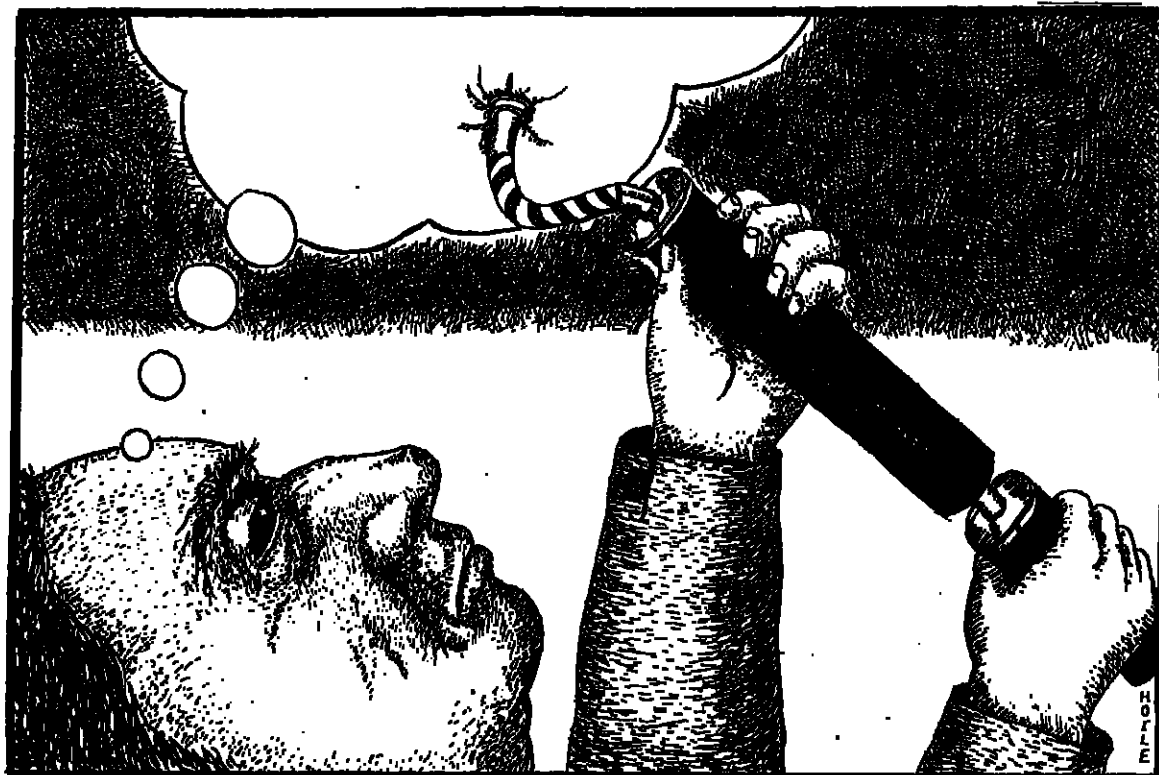
Over the last few years I have talked to thousands of students at universities (36 out of the 44 in the UK), polytechnics, art colleges and teacher training colleges. I have lectured to societies, professional associations and various conferences. The subject of thinking has taken me to Canada, USA, Mexico, Venezuela, Argentina, New Zealand, Australia, Singapore, Malaysia, Thailand, Sweden, Denmark, Holland, Belgium, France, Germany, Switzerland, Spain, Italy, Elre and Malta. In all these instances it has been the subject rather than the speaker that has been of interest. I also run what is the largest programme in the world for the direct teaching of thinking as a school subject. Professor George Gallup (of poll fame) tells me that in every annual survey of what parents in the USA want from education the top priority is always "that education should teach people how to think".

One of the reasons we are so complacent about thinking, and so bad at it, is that we mistake fluency and articulation for thinking. Up to a point language is most useful for thinking—but beyond that point it restricts, muddies and falsifies thinking. The purpose of language in communication is not thinking. For communication an evolved language is valuable—for thinking there needs to be a designed language. We need operating languages not descriptive languages. Most of our philosophical energy has been directed towards rescuing us from these inadequacies of language. In its thinking our culture has been too dominated by the literary enclave because others have been too busy doing other things—and too poor at communication. In the future we shall design meta-languages that will be much more useful for thinking.

## Our respected scientific method may also have passed its peak of usefulness

Our dialectic habits have much to do with language for these habits were perfected by medieval schoolmen to defend a language-based theology against language-based heresies. The method was so effective for this purpose that it high-IQ do not need education in thinking which was for so long run by the Church. The Japanese who have never been tainted by this quality and ineffective idiom use a "switching mode". Their is a society of rigid patterns and free exploration. If this exploration uncovers a better idea than there is a complete insight "switch" without the trauma and waste of dialectic clash.

Our respected scientific method may also have passed its peak of usefulness and may now be inhibitory in many areas. The development of "statistical" methodology



Edward de Bono argues that our obsession with scholarship emasculates too many good minds

aided by computer processing compounds the danger. The idiom of measurement and analysis is simply not appropriate in many fields. For the "soft" fields of system and pattern we badly need to develop new idioms. We also need to improve our conceptual skills instead of hoping that data will produce ideas for us. Yet how much time do we spend in our scientific training on conceptual skills?

Our academic obsession with history, review and scholarship entraps and emasculates too many good minds. This obsession arises from the emphasis throughout education on descriptive rather than projective thinking. We believe that from a complete field of information appropriate action will follow. As a result we neglect "operacy" which is a word I coined two years ago to describe the skills of doing. I feel operacy should rank alongside literacy and numeracy in education. Economics is in its current mess because it has been taught as a descriptive subject rather than an operative one.

Many of our hallowed idioms of thinking have been valuable up to a point—but beyond that point they were inadequate, inhibitory and dangerous. Thinking is especially dangerous when they breed complacency and the classic academic lock-in. Those exercising judgement can only judge through the idiom that has elevated them to the position of judge. We also tend to be misled through equating intelligence with thinking. We assume that as a person of high intelligence is also a good thinker. That is so only if we define intelligence to include the ability to think effectively. If, however, we define thinking as "the operating skill with which intelligence acts upon experience" then we can find that there is often an uncommon experience that some highly intelligent (IQ rating, speed, fluency, understanding) people are rather poor thinkers outside their chosen field. There is more to thinking than the reactive sorting of information overlays. There is a huge danger in equating intelligence with thinking skills: we solve ourselves from doing anything about the matter. Those with a high IQ do not need education in thinking; those with a low IQ cannot be helped anyway. This is probably the most dangerous and damaging fallacy in the history of education. We only need to look at the evolution of mathematics to see how native skills can be improved by notational methods.

The traditional research approach of cognitive psychology may be the least valuable. Finding out how people think and the strategies they use in solving puzzles might just be an end in itself. The conceptual approach may be

more valuable. We may need to construct information universes. Many years ago I set out a patterning universe in *The Mechanism of Mind* which is as plausible and as unproven as Darwin's universe of evolution. But, like that concept, it shifts us from a universe of organized information to one of self-organizing information. From such an information universe a number of predictions can be derived. For example the processes of lateral thinking and the value of provocation arise quite logically within such a universe. So does the prediction that learning backwards should be more effective than learning forward. There is also a suggestion that a considerable part of thinking must be carried out with chemical field effects as well as neurons. There are many more predictions as is usually the case with universe or paradigm shifts.

Mathematics is a superb thinking system designed without reference to the way the mind works. No doubt we shall continue to extend mathematics upstream to handle the perceptual interface of man and his world. We shall also develop conceptual and notational systems that will improve thinking. One of the most powerful words I have come across in any language is the word "billion" which is to be found in Piglin in Papua New Guinea. The word has nothing to do with property or possession but simply indicates a perceptual field—its very lack of specificity is its strength. There is no word in ordinary English usage that is as powerful an equivalent. I once suggested the word "po" as an indication of operation outside the judgement system to allow the more deliberate use of provocation (there may not be a reason for saying something until after it has been said).

## Because thinking is everyone's business it ends up by being no one's business

Nor should we forget the practical application of thinking. If the world is going to survive in any sort of democratic form, then people are going to have to do a good deal more thinking than they are used to at the moment. The Venezuelan government is the first to have appreciated this. The CORT (Cognitive Research Trust) thinking programme is currently being introduced into every school in that country. This same programme is used with nine year olds in the jungle and also with senior corporate executives in Europe. To be usable, methodologies need to be

robust and practical rather than exotic. The idiom of development is the idiom of design. Research alone is insufficient as a constructive idiom.

Because thinking is everyone's business it ends up by being no one's business—and nothing gets done. It is so sensible and so important that we dare not do anything because that becomes an admission that we are not already doing enough.

We believe that when the time is ripe it will happen anyway without the need for deliberate action. The logic of any institution insists that it must reach a point of ineffectiveness when all its resources are required simply for the maintenance of the status quo—and none are available for change and innovation. This point has been passed some time ago by most academic institutions.

The practical difficulty with paying attention to thinking is that it is so very easy to slide into other subject areas such as mathematics, philosophy, logic, epistemology, history of ideas, psychology, linguistics, informatics, computer science, artificial intelligence, education or business studies. All these include a part of thinking but exclude much more. That is why it is necessary to create, firmly and positively, a subject area labelled "thinking" in its broadest sense. A symbiotic relationship can then be established with related fields. For example much of economics today has to do with the thinking of consumers and investors who do not follow the simple mechanical behaviour of classical economics.

Catch-23 suggests that an idea may be a good idea—except at any particular moment in time. This particularly applies to innovation when the cutback of funds is threatening the continuation of existing departments. This dilemma applies cruelly in industry and uncomfortably in the academic world. How is Catch-23 to be broken? One way would be to allocate a specific fraction of government funding to innovation. Such funds could not be used for maintenance or extension of on-going operations. Another way to break Catch-23 would be to look to those institutions whose social role is precisely to lead such innovation. The major foundations come to mind here for their role must be to fund the innovations that the logic of a mature institution cannot fund. On the whole I think that in this respect the foundations are in a better position than the social duty since they seem to operate on a "patch-up" basis, providing funds for new buildings or equipment when they are otherwise available. Perhaps one day we expect no more than this kind of type of funding from committees

the institutions from which the members come. In my own experience innovative funding must come from individuals.

Business is the biggest consumer of thinking for effective thinking makes the difference between success and disaster—especially in a changing world where momentum and market muscle mean less and less. In Britain it is a lack of serious concern for thinking (in contrast to Japan, Sweden and Switzerland) that forces British industry to move straight from complacency to crisis and complaint. Most industrialists have a limited day to day vision that copes with problems as they arise. The excuse of financial stringency is obviously inappropriate with the financial institutions and oil companies that benefit from the very circumstances that hurt others.

Underlying all this is what I call the "entrepreneur fallacy" which holds that since entrepreneurs continue to surface nothing really needs to be done to encourage them. Yet if more was done to encourage them we might get more and better entrepreneurs. The type that emerges at the moment tends to be driven by courage and ego than good business sense: they flourish for a while and often collapse.

## Education is an area where the third world countries can leap over the developed world

In 1979 the newly elected government in Venezuela appointed a Minister for the Development of Intelligence. After an extensive survey of what was happening around the world the new ministry decided that what we had been doing at the Cognitive Research Trust in Cambridge was the most relevant to their needs. After the evaluation of a year's pilot programme, it was decided to introduce thinking as a curriculum subject in all schools at grades 4, 5, and 6. This involves the training of 40,000 teachers. This is now going ahead at an administrative cost of over £1 million—which may be contrasted with the £4,500 the Schools Council is investing in a three year pilot project in the country.

Education is an area where the Third World countries can leap over the developed world simply because they are not stultified by institutional senescence. All that is required is a decision and commitment of effort in a direction.

If such a decision were to be made I would propose the following action plan. The first necessity is that of focus. I would suggest the setting up of a properly staffed body or institute which would act as a centre for the study of thinking. This body would design and coordinate centres for the study of thinking in universities and other academic institutions. Such centres would have the dual role of research (in tandem with other departments) and application development. A secondary school level examination in General Thinking Skills would be needed to establish examination status that would encourage secondary education examination status that would encourage secondary education.

All this is ahead of the demonstration of axiomatic methodology. There is much practical experience available but much pioneering work remains to be done. To help this I propose to establish a group that will do for thinking what the Royal Society in its earliest days did for science.

In the end people are the ultimate resource and thinking is the ultimate resource of people.

The author is honorary director of the Cognitive Research Trust and the Centre for the Study of Thinking, Cambridge.

## Assertions

Why South Africa Will Survive  
by L. H. Gann and Peter Duignan  
Croom Helm, £14.95  
ISBN 0 7099 0223 9

Lewis Gann and Peter Duignan have been prolific writers, sometimes individually, more often in tandem, on a range of subjects whose common denominator is the significance of white men in Africa. This latest contribution is clearly normative in intent. It reads sadly as though Gann and Duignan had become irritated beyond endurance with other people's writings. Their normal intellectual rigour has been replaced by gratuitous sideswipes at straw men, whether crude Marxists or naive liberals. Some of their assertions are manifestly false (the public transportation in Cape Town is segregated) and their statistics are regularly employed with a cavalier disregard for their ambiguities.

The book's aim, which is not new, is to "set the record straight" about South Africa. Thus, the authors seek, among other things, to destroy the myth of the backwards Afrikaner, to emphasize the positive side of changes induced by white rule among the blacks, to assert the flexibility and durability of the structure of white power within South Africa, to show the weaknesses and divisions of non-white political organizations, and to insist on the developed nature of the economy.

In a long chapter they evaluate favourably the strategic and defence potential of the country, and they argue that the West's interests, both economically and politically, are best served by treating South Africa as a friend rather than a pariah.

The final chapter sums up the authors' personal view that South Africa is an economic success and could well liberalize itself politically, especially if the West changed its present stance. While none of this is new, it usefully restates the arguments against too ready an assumption that white-ruled South Africa is on the verge of collapse; unfortunately, it is restatement rather than hard, analytical argument.

The blurb acknowledges expectations of dissent from Marxists and liberals, and I could not disappoint them. What concerns me more than my profound disagreement with their evaluation of political developments in South Africa is the sketchy academic base on which their positions rest. Their use of language is cavalier: "ethnic", for instance, refers sometimes to races and sometimes to culturally distinguishable groups within races. They assert rightly (but leave the issue unexamined) that Afrikaners are not a monolithic group, yet they treat other groups and especially schools of thought with which they disagree, as monoliths. They put up with suitcases with rare enthusiasm and seem unaware of the sophisticated scholarly writing on South Africa. They regularly present irrelevant and false comparisons, which may have a propaganda impact, but advance our understanding of political action not at all. They show precious little understanding of the literature on the subject of political forces (and virtually no familiarity with the literature on the economics of the country) while their emphasis on gross economic statistics neglects the real, if deplorable, tendency for people to be conscious of relative deprivation or prefer political and human rights to money.

There has been a considerable scholarly debate on the future of South Africa, reactivated most recently by R. W. Johnson's challenge, *Can South Africa Survive?* to which, assumed this book by its title, was a reply. But Gann and Duignan seem unaware of the debate, despite one curiously inappropriate reference to Johnson among their parsimonious references, and they have certainly added little to it. What remains is an impassioned attempt to rescue South Africa's reputation from the clutches of their "Marxist and liberal opponents; but passion alone did not suffice to convince this reviewer.

Richard Hodder-Williams

Richard Hodder-Williams is lecturer in politics at the University of Bristol.

## BOOKS Christian stands against oppression

Christianity in the Southern Hemisphere: the churches in Latin America and South Africa  
by Edward Norman  
Clarendon Press: Oxford University Press, £12.50  
ISBN 0 19 821127 9

by John Armon

To travel around Latin America or South Africa at present is a heady business, particularly for a Christian. They are countries where violence and poverty are endemic on a scale quite unlike anything in Britain. And in reaction against this—the churches—or some of them—are engaged in activities which bring them more or less frequently into direct conflict with the state authorities. To visit these places is, therefore, to meet men and women who, because of their association with the church and with social and political stances, are obliged to live at risk. During a recent trip to Latin America, I met many who had been in prison, or who have since been arrested. One missionary I met in Bolivia has subsequently been horribly tortured before his body was dumped in the river.

To travel in these parts is to see and hear, if you have ears and eyes open, much which shocks the heart and mind, and which cannot but leave one profoundly moved. Of course, it is possible to travel with eyes and ears closed—as Graham Greene's essay "Don't Look at Me" describes so biting: such people come back with tales of all being well. But all is not well. Behind the scenes, off the tourist route—but sometimes in front of the scenes and in the middle of the street—where violence breaks out, and the oppression, with its violent response, becomes vividly apparent.

None of this, of course, indicates anything about the truth or adequacy or wisdom of those who take a stand—Christian or otherwise. They may be martyrs—and they may be wrong. But their commitment demands from those who attempt to describe it a very considerable moral searching, and some evidence of having entered at least as deeply into the kind of experience which provokes their theology and ideology. For those of us in the more privileged societies, this is hard to do.

Does Dr Norman's book on the churches in Latin America and South Africa meet this requirement? Yes and no. It is an attempt to give an account, from a historical and sociological point of view, of how the churches have come to take the stands they have. *Christianity in the Southern Hemisphere* is his title—but this must be interpreted fairly loosely. Mexico is covered among the African states. Australia and New Zealand are not mentioned at all. More significantly, in view of his thesis, none of the countries designated "south" in the currently fashionable Brandt Report is included—India, China, the Far East (the Philippines, for example, the only Catholic country in the Far East, and scene of the Pope's recent visit), and the Middle East. This is a pity, for much of great interest is going on for example in Latin America, where the liberation theology movement has emerged in other parts of the Third World. The title is too ambitious.

This does not, however, detract from what the book does contain—the story in those places which Dr Norman has visited. Of these places he gives a careful account, filling out much of the detail many critics felt was lacking in his *Relith Lectures*, and attempting to show the way in which the history of the churches over the last 150 years—and their relations with the secular authorities—accounts for their stances today in the area of church-state relations.

The book is in three parts: the



A nun mourns for Archbishop Romero of San Salvador murdered in his chapel in March 1980.

first two deal with Latin America and South Africa respectively, and do so in each of four equivalent sections—an arrangement which allows the writer and the reader to move logically and neatly onto the third section, which is a comparison of the work and attitude of the church in those two areas. (This is not, it must be admitted, a comparison which springs to mind. It has rather the tone of an examiner knowing the candidate's range of experience and setting a suitable examination question.) It is strange, perhaps, that the whole of Latin America (twenty countries or so) gets the same number of pages as South Africa (one African state), but that reflects a more carefully documented analysis of the situation in South Africa.

However, the documentation still leaves something to be desired, and this is a serious fault. The argument advanced—less obviously here than in the *Relith Lectures*, but present none the less—is a controversial one, and one which is known to cause anger and pain in some quarters. It must therefore be carefully advanced and firmly based. Reflective scholarship is just that contribution which the resources of a society like ours enable us to make, and which is certainly needed by the churches of the south.

Thus remarks such as this on page 167 simply will not do: "One of the features of [South Africa] government legislation since 1948 has been an enormous increase in state expenditure on social welfare for the black population". Is this to be taken in absolute or relative terms? On what has the increased expenditure been expended? Put baldly like that, it seems to describe a generous attitude. Yet it is arguable that the increase is a necessary product of the evil of apartheid. Separation of black and white has necessitated the building of new homes, new schools, new hospitals. The homelands are an expensive business—they depend entirely on the South African government for their economic survival. Apartheid necessitates vast expenditure on state security, to maintain the unstable *status quo*. Are these the things covered by the "enormous increase in expenditure"? If the author believes that, this statement, as it stands, sums up adequately the development of economic spending on blacks, then he is open to the charge of negligence—in collecting his data, or in presenting it. It may come as a shock to his readers to know that for blacks there is still no social security, no child benefit,

no unemployment benefit. The statement is simply not sufficiently penetrating.

Further, sources and authorities are quoted, and thereafter accepted as true, without any demonstration of their accuracy. On page 80, to take an example at random, Professor F. C. Turner's "wise" remarks are quoted to support the claim that papal authority is attenuated in Latin America today. But we are not told why Professor Turner is wise—or correct—in this matter. And when Dr Norman goes on to adduce evidence as to the truth of this point, it is badly handled:

Colombia, despite the attempts of the clergy to instruct the laity in the prohibition of artificial birth control, repeated in the encyclical *Humanae Vitae* in 1968, is the world's fourth-largest market for contraceptive pills. It is also one of the most Catholic nations in Latin America. As evidence of the ideological origin of Latin American Catholic social thought, the papal encyclicals have clearly to be treated with reserve.

The questions this passage raises are numerous. What does it mean to say Colombia is "one of the most Catholic nations in Latin America"? What does it mean to say "the world's fourth-largest market"? How significant is it to take one issue, and that an issue which has been widely troublesome, and make it indicative of a nation's attitude to papal authority? Is it legitimate to take the attitude of one nation and apply it to a continent?

In the same way, the author's own judgments, crucial as they often are for the advance of his argument, could do with more backing.

It was the church of the Province of South Africa, the Anglicans, who were the first major religious advocates of a full programme of state social action. The reason for this lay in their proximity to English opinion (page 180).

True or false? True, no doubt, in some cases and to some extent. But at least one influential Christian in South Africa—an Anglican priest—adopted a position opposed to the present government's policies precisely because one night one of his students was arrested. Is not encounter—repeated encounter, as it may be—with injustice and unaccountable authority, at least arguably, as powerful a force of motivation? What better example of this than Archbishop Oscar Romero in El Salvador who was conservative

when appointed, but who changed heart in response to what, as Archbishop, he saw.

One more example—an important one, for it is near the heart of Dr Norman's thesis. On page 82 there is a crucial passage about the politicization of the church: at the Medellin Conference of Latin American bishops in 1968, "attempts were made . . . to identify new social ideas with papal teaching. But this cannot bear critical examination." Perhaps not: we read on to see:

It is difficult to avoid the conclusion that the advanced social thinking of the 1960s was the adoption . . . of the secular moral idealism of the Left. The result was surely the politicization of parts of the Church's leadership, not the Christianization of secular political society. But the point is that some find this conclusion very easy to avoid, and what we should look for is guidance as to whether it is the right conclusion or not.

What is at stake here is the judgment of the historian. I myself am not qualified to comment on Dr Norman's historical judgment—but it would seem that he leans too heavily on his own authority and that his positions are stated without sufficient backing. "Of course" occurs frequently—and what is the force of "surely" in the last example cited? His descriptions of the situation today—the attitudes of the clergy, the divisions of the church, the stances taken for or against particular social developments—match only in part what I have seen to be the case. The pity of it is that at just that time when Third World theologians (Liberation or Black) could be helped with a critical appraisal of their work (so much more than by the cited chattering of those who would ape them in this country) Dr Norman seems to miss the chance. And just as they, in his judgment, have capitulated to current liberal fashions in their thinking, so he, in theirs, has sold out to what a review in this paper (*THE* January 30) called the Peterhouse Blues.

If there is to be a fruitful exchange, simplistic labelling has to be avoided. From this end what is needed is a more dispassionate passion—the essence of the academic discipline—rather than material which will only please armchair conservatives; and what will ease this exchange is evidence of a compassionate grasp of the plight of Christianity in the southern hemisphere.

John Armon is vice-principal of Weston House, Cambridge.

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## BOOKS

## An American in Indochina

Why Viet Nam? Prelude to America's

Albatross

by Archimedes L. A. Patti

University of California Press, £12.00

ISBN 0 520 04156 9

In the summer of 1944, with the war in Europe entering its final phase but the Japanese war promising further years of hard and bloody fighting, Captain Archimedes Patti was selected to lead an Office of Strategic Services (OSS) mission in Indochina. After a few months in Washington vainly trying to familiarize himself with the area from thin and almost totally uninformative official files, he arrived at Kunming in April 1945 to commence his new assignment. Japan accepted unconditional surrender on August 15, and his OSS mission touched down a week later at Hanói, where it remained until the end of September. The account of his months in China and these six and a half weeks in the northern Vietnamese capital constitutes the core of *Why Viet Nam?* and is the first public statement made by Patti about his mission.

After thirty-five years the publication is most welcome and fills important gaps in the history of the period. The rest of this very large book comprises a not very accurate introductory section on the background to the "China Theater" and a final section of appendices and notes. Astonishingly, he expresses thanks for their guidance on more recent Vietnamese politics to Truong-dinh-Hung, convicted in the scandalous Vietnamese communist case of espionage and theft of State Department documents, and to Gareth Porter, who publicly made such an ass of himself by "correcting" a Vietnamese scholar for mistranslating the Vietnamese communist expression "hand-to-hand".

The supremely confident American abroad intent on setting benighted foreigners on the right path and solving their problems for them is, alas, an all too familiar figure. When, as in World War II, such persons may have at their disposal limitless resources of arms or money, they evoke not smiles but fear because their naivety and innate prejudices render them easy prey for the unscrupulous exploiter. President Roosevelt's own well-known prejudices included extreme anti-colonialism and an almost pathological hatred of France and de Gaulle, in that order, which frustrated Churchill and delighted Stalin. These prejudices heavily influenced American foreign policy at the time, and their effects were often greatly magnified by interpretations — too often misinterpretations — of them by American officials overseas. Archimedes Patti steered his course in Indochina by the twin stars of anti-colonialism and the Atlantic Charter. Symptomatic of the incompetence with which America handled policy was the instruction of General Wedemeyer, China Theater Commander, to Patti: "Do what you like in Indochina but don't cross up Washington." This set the stage.

For Ho Chi Minh, intellectually brilliant, Moscow-trained, and with years of experience as a professional agent of the Comintern, the Americans arrived like a blessing from heaven — in which he did not believe. General Chennault, expecting Ho to ask for arms, money, and resources, was delighted when he requested only an autographed photograph of the general. But Ho's claims of Allied support, buttressed by the evidence of the photograph and the dedication, so impressed the Vietnamese political groupings that he achieved all the support he needed. Ho flattered Patti,

P. J. Honey

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## Cyprus from the inside

Cyprus: Conflict and Negotiations

1960-1980

by Polyvios G. Polyviou

Duckworth, £22.00 and £9.80

ISBN 0 7156 1498 3 and 152 X

Mr Polyviou writes on Cyprus as an insider. Besides being a lecturer in law at Oxford, he attended the Geneva Conference of August 1974 as a member of the Greek-Cypriot delegation and has had access to many confidential documents from the Greek-Cypriot side.

He begins by outlining the constitution under which Cyprus received her independence in 1960 and the story of its collapse between 1963 and 1967, and follows this by a detailed account of the abortive intercommunal discussions of 1968-71. After their breakdown, the UN expanded basis, with the UN mediator playing a more active role. But the encouraging progress which was then made was abruptly halted by the Athens-backed coup against Makarios and the Turkish invasion of July-August, 1974. Mr Polyviou describes all these developments, and closes with an assessment of the attempts made since 1974 to reach a new settlement.

The main strength of this study is that it gives us a great deal more information than has hitherto been generally available about the negotiations between the Greek and Turkish Cypriots during the 1960s and 1970s. In particular, the author makes the important point that nearly all the important gaps between the two sides negotiating positions had in fact been closed by the

spring of 1974 and that, as he claims, agreement on the remaining points of difference could have been reached by August of that year. He also adds a great deal of valuable detail on the two Geneva conferences of 1974 which illuminate Greek, Turkish and British policy at the time.

His position as an insider, however, has its drawbacks. Telling his story from a strongly Greek-Cypriot viewpoint, he ignores many of the more discreditable aspects of Greek-Cypriot policy and apparently distorts the Turkish position on several important points. In particular, he fails to come clean about Makarios's attitude towards Enosis in the period of Cypriot independence. Although he correctly describes the struggle between Makarios and the pro-Enosis fanatics of EOKA-B during 1971-74, he fails to refer to the fact that, for instance, the Greek-Cypriot House of Representatives unanimously passed a resolution calling for Enosis in June 1967, or that Makarios himself told a Greek-Cypriot newspaper in October of that year that "the real victory will be achieved when Cyprus will be annexed to Greece without any concessions whatever". These omissions are not surprising, granted that such attitudes severely undermined the Greek-Cypriot claim that they respected the interests of the Turks.

Similarly, in describing Turkish and Turkish-Cypriot policies, Mr Polyviou skates over several important points. During the 1960s, the Turkish-Cypriot population gradually concentrated in certain areas of the island, abandoning their villages to the Greeks. The author twice refers

to this as a process of "self-segregation" without mentioning that in many cases Turkish settlements were physically attacked by the Greek Cypriots. By 1967 it was estimated that about a third of the Turkish-Cypriot community were refugees, forced to live on what (approximately) the same proportion as that of the Greek Cypriots made up of the Turkish invasion of 1974). This is not to suggest that two wrongs make a right, but his failure to mention these points makes it hard to support Mr Polyviou's claim that he has tried to present us with a "neutral and balanced exposition".

The author's apparent bias continues in his analysis of the Turkish invasion. He correctly points out that the invasion was incompatible with the terms of the Treaty of Guarantee, but maintains that the *Samarkand* coup was for the Turks no more than a "long awaited opportunity" to invade the island and that Turkey was not motivated by concern for the security of the Turkish Cypriots. Again, this ignores the fact that the Sampson himself had an appalling record as a terrorist, both against the British and Turkish Cypriots and that Colonel Ioannides, the strong-man of the Athens junta, had on Makarios's admission, earlier prepared a plan under which "we shall exterminate the Turks to the last person in the general onslaught".

Clearly, a further book on Cyprus is still needed, to set the record straight.

William Hale

Dr Hale is lecturer in politics at the Middle East of the University of Durham.

## Correction

In *THE*, April 24, the last sentence of Martin Bullmer's review of Frank Pridemore's *Inequality in Britain* should have read "How to blend the analytical and the normative in a convincing manner, so that the single substantial rather than merely justified, the policy recommendations, remains intractably difficult".

## America's possible futures

In *The United States in the 1980s*, edited by Peter Dittmann and Alvin Rabushnik, 32 contributors explore the different possible futures for the US. W. Glenn Campbell of the Hoover Institution outlines in his foreword to the book, the problems the country

faces, emphasizing the necessity for a rediscovery of "a sense of purpose" and the importance of recognizing "that there does exist the national will required to deal effectively with the problems." The book is published by Croom Helm at £14.95.

## BOOKS

## Diplomacy and the Middle East

Islam in the Modern World

by E. Kedourie

Mansell, £10.00

ISBN 0 7201 1570 1

Professor Kedourie's prose style is perhaps best described as didactic. He is trying to teach lessons, to point out morals. One of the major themes in this book, a theme particularly suited to this style, is that change is almost inevitable for the worse, whether in the context of the Tanzimat reforms in the nineteenth century, the ending of colonial rule in various countries in the Middle East and North Africa, the enlargement of Lebanon to its present size by the French in 1920, or Shiite Islam in the context of the revolution in Iran. The tone of many of the articles in this collection is one of nostalgia for better and more spacious days, and of evident distaste for the successor states of the Ottoman Empire, an institution, and an era, to which Professor Kedourie often harks back with affection and respect.

In spite of the book's title, only four of the 17 studies are directly concerned with Islam. The others, including a previously unpublished essay entitled "Great Britain and

Palestine: the turning point", are concerned with current Middle Eastern and international affairs, and diplomatic history. It is difficult to avoid the impression that, in general, politicians and civil servants are a pretty unsatisfactory lot. T. E. Lawrence (fair game, perhaps), Dag Hammarskjöld, de Gaulle, Ayatollah Khomeini, all have their frailties exposed to our gaze.

The essay I found most interesting is the final one, "In the *Anglo-Arab Labyrinth*: genesis of a history". Here Professor Kedourie describes how he came to write his celebrated study of the McMahon/Hussein correspondence, and concludes by explaining the main aims of his enterprise. The final sentences read:

"If I were successful, I came to think, the work would speak not only to amateurs of Anglo-Arab relations or the students of intellectual history. It would take its place — a modest one, assuredly — among those products of the historian's art — of which Maitland's writings, say, or Joseph Levenson's are a supreme example — that seek to restore, for whoever cares to read them, in all its clarity, the meaning of the thoughts and actions now dead and gone which once upon a time were

the designs and choices of living men."

Professor Kedourie's concern, then, is to show the intellectual and moral climate in which diplomatic decisions were taken, to explain why and how particular policies were formulated. In the *Anglo-Arab Labyrinth* and studies such as "Great Britain and Palestine" in this volume, are meticulously researched accounts of the internal mechanisms of decision-making and decision-taking, which enable us to follow the minute details of the formulation of policy. Few historians can tell us more about British Middle Eastern policies in the First World War than Professor Kedourie, and given the enormous complication of the subject, and the fact that the relevant papers are divided between a bewildering number of government departments and overseas posts, his achievement is no mean one.

Earlier in the same essay, Kedourie complains that "diplomatic history, dominant for so long in the academy, has now fallen into disrepute", and points, with some concern, at the growing "fetishism" for social history. He cites the *Annals* school and its efforts to provide a more global and total historical perspective than the

*histoire événementielle* with which he would associate his own work. What is not clear, however, are the grounds on which he professes his own approach. He refers to the sense of "puzzlement" which may or should motivate the diplomatic historian, but nothing more substantial than this. Indeed, he asks "how is one to establish that one criterion rather than another must have the historian's undivided allegiance?" This question poses two problems. In the first place, it makes the decision almost a random one, as if it were not the case that certain approaches must assist our understanding of the past more than others. Secondly, is "undivided allegiance" really what is required? If Wuttstein (whom Professor Kedourie quotes to make his point) appears to be making a rather extreme case for rejecting the "political and diplomatic façade", it is surely because he sees this as insufficient *without* the social and economic dimension. His own *Modern World-System* (1974) and *Bruegel's The Mediterranean and the Mediterranean World in the Age of Philip II* are eloquent proof of the insights that can be obtained from this integrated approach.

The main point is a simple one: it is

not a question of "undivided allegiance", but of the judicious recognition of a series of subtle and complex interrelationships. Some of Kedourie's studies of the contemporary Middle East in this volume illustrate the limitations of the one-dimensional approach. Thus the Lebanese Civil War is seen more within the framework of the long-term consequences of the particular boundaries created by the French in 1920 and of the National Pact of 1943 than in terms of changes in demographic and economic structures which, together with certain historical and political conjunctures, combined to bring the war about. The essay on recent events in Iran sees its subject matter almost entirely in political and ideological terms, while that on religion and nationalism also confines itself to the study of nationalist doctrine rather than the varieties of responses to it on the part of different social groups. A broader perspective might have provided a more accurate reflection of some important contemporary realities in the Middle East.

Peter Sluglett

Peter Sluglett is lecturer in modern Middle Eastern history at the University of Durham.

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## BOOKS

## France's last colonial war

## The War Without a Name: France in

## Algeria 1954-1962

by John Talbot

Faber, £6.95

ISBN 0 571 11671 X

The war fought by the French to retain sovereignty over Algeria was bitter and deeply divided the French nation. Frenchmen killed Frenchmen, Algerians killed Algerians and they both killed one another. Atrocities and reprisals, terror and torture became routines which first repelled and then numbed observers of the war in metropolitan France and abroad. One regime was destroyed in France and another came into being, amid accusations of treason, treachery and brutality. But, as John Talbot writes in the last sentence of the book: "in 1962 both the danger and the cries of danger ceased. On the subject of Algeria, a great silence fell over the land." The whole episode suddenly seemed like an unfortunate and stupid mistake.

It is now possible to view the war in historical perspective. This has become easier with the fading of the bitterness caused by the disastrous involvement of the United States in Vietnam where, for many, the same issue was posed: defence of "the West" against the creeping encroachment of international communism. An American has now written, with sympathy and detachment, the history of France's last great colonial war. His account is based on the published record (which is voluminous) and there are not, therefore, any great new revelations in it. Indeed, it is difficult to imagine from where such revelations could come. The search for *inédits*, through interviews and unpublished papers, would probably unearth only the trivial and the unreliable. Some obscure episodes, such as the Si Salah affair, in which the commander of Wilaya IV district of the Algerian Front de Libération Nationale (FLN) offered in 1960 to surrender, thus creating the belief among some French army officers that the Algerian nationalists had been defeated, will forever remain obscure because of the premature decease of key participants. Others have been illuminated to some degree by recent research, such as the active collaboration of some Frenchmen with the Algerian nationalists, in the book by Hervé Hamon and Patrick Rotman, *Les Porteurs de la valise*.



In April 1961 tanks pass through the Paris streets in anticipation of an invasion by the army in Algiers.

which appeared too late for Professor Talbot to use.

The narrative history which is presented here is unlikely to be modified in important respects by the uncovering of new information. The major events, from the rising of the FLN in the Aurès mountains in November 1954 and the immediate military response of the Mendès France government to the signing of the Evian agreements in 1962 and subsequent French withdrawal, are chronicled in an illuminating and economical way. There are incisive sketches of the cast of actors - politicians, soldiers, settlers, journalists and intellectuals - who played the important roles in the protracted drama. It is above all a judicious book. The motivations and behaviour of the people and groups involved are subjected to scrupulous and balanced assessments. The pages on the great commanders - on why Mendès France, after being the great champion of decolonization, decided that the shack of firm government was the right policy for Algeria, and on whether de Gaulle could have made peace on the same terms earlier - are excellent. Those who wrote most about

the war, the intellectuals, are assigned, too doubt rightly, to a marginal role.

Professor Talbot is perhaps at his least informative and least convincing on the nature of the *Algérie française* lobby in metropolitan France. Duchet and Tixier-Vignancourt do not figure in his account; George Bidault and André Morice are mentioned only once. Yet the networks of politicians, administrators, ex-servicemen and policemen who were working in the cause of keeping Algeria French appeared formidable and threatening enough at the time. With hindsight they seem incompetent and ineffectual but their contemporary reputation was perhaps a more important factor in the behaviour of the other actors than Professor Talbot allows.

Other judgments may be disputed by readers with different political outlooks. There can, however, be no dispute that this is an elegant contribution to contemporary history, which is a pleasure to read.

Malcolm Anderson

Malcolm Anderson is professor of politics at the University of Edinburgh.

## Guardians of a post-colonial state

The Politics of Elite Culture: explorations in the dramaturgy of power in a modern African society  
by Abner Cohen  
University of California Press, £4.25  
ISBN 0 520 04275 1

In order to maintain itself, an elite must reach some accommodation between the particularity of its structure and the universality - real or supposed - of its functions. If it fails to preserve its own internal coherence and identity, it ceases to be an elite. If it fails to persuade outsiders that it serves common and public goals, its leadership will be rejected. Within the context of a single profession - most obviously law and medicine - this quality is clear enough. Within a national, socio-cultural elite, the same principles apply, but are very much more difficult to unravel.

In this superb study Abner Cohen examines the tiny, highly organized, and culturally distinct elite of a small West African state, Sierra Leone. The Creoles of Freetown dominate the entire range of state-centred professions: the law, the bureaucracy, education, medicine, the church. Heirs to a long tradition of westernization, they faced the British withdrawal from empire both an opportunity and a threat. The opportunity was in taking over those professional positions which since the late nineteenth century had been reserved to expatriates. The threat was that constituting less than 2 per cent of the national population, they could not hope to resist the pressure

of formal political power to the up-country majority. They responded, on the one hand by championing the universalistic values of liberal pluralism which protected them against the abuse of hinterland political power - an independent judiciary, a free press, a multiparty system - and on the other hand, and much more importantly, by developing institutions of Creole self-awareness and mutual assistance. Cohen is at his best in conveying the dramaturgy of this process, the complex and - in both time and money - highly expensive ceremonies by which the values of Creolism are created and conveyed: the formal balls, the weddings and funerals, the graduation ceremonies, which fortify Creole self-awareness of their role as guardians of civilization; the network of moral obligations, reinforced by the cult of the dead, which bind richer and poorer Creoles into a single community; and the highest institutional expression of Creolism, Freemasonry, which as he clearly shows, developed during the periods of greatest external threat. Unlike many students of elites, he is prepared to sympathize with his subjects. He enjoys the music. He is moved by the oratory. And so, while accepting the instrumental utility of elite culture, he is able to present it as something experienced and valued in its own right, rather than simply a set of symbols cynically manipulated for private gain. Were it no more than that, it would fall even as that.

Caught up as he is in the internal structure of the elite, he does very much less to analyse its external linkages. Where these come from is in large measure, the former colonial power: the Anglicanism, the Freemasonry, the legal, educational and bureaucratic systems are all colonial emanations which fit the Creoles peculiarly well for their role as guardians of a post-colonial state. But the linkages in the other direction are equally important: have the Creoles succeeded in presenting themselves as the guardians of the public good, or are the ceremonialists which Cohen describes effective only for those who perform them? Are they evidence of success, or of a retreat into their own community which must ultimately be a failure? The answers to these questions lie outside the community itself, and it is unfair to expect Cohen to provide them, but within the context of his own approach they certainly need asking.

Finally, one can only welcome and be thankful for an African case study which unhesitatingly directs itself to general issues of social and political control, and not to the supposedly special problems of underdeveloped periods. Of greatest external threat, that of C. Wright Mills or Heidegger, the nature of elite control in any society, and however great the difficulty of generalizing from so peculiar a community as the Freetown Creoles, it is within this context that it deserves to be read.

Christopher Clapham

Christopher Clapham is senior lecturer in politics at the University of London.

## BOOKS

## Portrait of a consummate politician

## Tito: The Story from the Inside

by Milovan Djilas  
Yieldfield & Nicolson, £7.95  
ISBN 0 297 77885 4

When Tito died in May 1980 he had become a legendary figure. He embodied the heroic partisan resistance to the German and Italian occupation of Yugoslavia in the Second World War. He symbolized the creation of a new Yugoslavia, which allowed its antagonistic nationalities a degree of cultural autonomy and political recognition within the framework of a wider socialist Yugoslav patriotism. He stood at the head of his country and his party when in 1948 communist Yugoslavia defied Stalin and the Cominform, and he presided over the experiment in de-Stalinization and democratic socialism which began in 1960 and which is sometimes designated Titoism. As the founder of a new way through war and revolution, who invested in with independence and comparative stability over the succeeding thirty-five years, Tito has genuine claims to legendary status.

Myth-making about political leaders inevitably involves however two kinds of oversimplification: a political simplification which turns complex circumstances into a heroic tale of right triumphing over wrong; and a personal simplification which turns a man with mixed motives and qualities into a pure and godlike figure. It is the second aspect of the Tito myth that Djilas is mainly concerned to examine, and to reveal the real personality behind the myth. Djilas is also interested in how and why Tito contributed to his own legend.

Djilas has not written a biography, though his book will be an essential source for an authoritative biography. He has attempted what the publisher accurately describes as a "portrait". This is the first frank appraisal of Tito's qualities as a man and politician since his death, and is of interest for that reason alone. But the main interest of the book lies in the peculiar nature of the relationship with Tito, as close friend and colleague in the war and early postwar years, and as a political opponent since 1954, who was

nevertheless still bound by the closeness of his previous personal ties. Djilas, in his own words, loved and respected Tito; and claims convincingly that Tito reacted with fury and anguish to what he saw as Djilas's disloyalty.

Indeed Djilas is almost as much an epic figure as Tito himself. He is descended from a family of Montenegrin warriors, who engaged in tribal blood feuds which led generations of them to a violent death; and has chronicled his family and Montenegrin background in *Laid Without Justice*. As a student Djilas became a communist, and endured torture and imprisonment; he played a prominent role in the partisan war against the Germans; and in 1954 he again went into opposition, resisting a new form of oppression by his former comrades, and was sentenced to a further two terms in prison. His life has been the life of an archetypal rebel, and in retrospect he is clearly unhappy about his years in power and the corrupting effects of exercising that power. He has the qualities of a rebel: courage, stubbornness, extreme idealism, a refusal to compromise for prudential personal or political reasons, and an intolerance of those who do not match up to these exacting standards. Discussing his break with Tito in 1954, Djilas observes:

Because of my obsession with ideas, I could not manage the tactics of secrecy or manipulate power, though I was tempted by both. That was it. I lacked political sense. I lacked an instinct for subtle, gradual far-reaching political strategy.

This book is in part an attempt by a born rebel to explain what kind of personality, and what kind of skills, go to make up a supremely talented politician who is at home in taking and keeping power.

Djilas sees Tito as someone whose only, but great, talent was a talent for politics. His book is therefore not only the portrait of a man but a reflection on the character of a politician, and on the first page he comments on the nature of a man who has a vocation for politics. Djilas seems therefore to be promising us an essay in political theory on the

Machiavellian model, using the character and deeds of an outstanding political leader to illustrate the nature of politics, its moral dilemmas, and its practical necessities. Machiavelli might well have admired Tito, and seen in him the mix of magnanimity and ruthlessness, of public-spiritedness and power-seeking which can combine to make a great prince. But Djilas is offering us a Prince in reverse. He suggests at the end of the first chapter that the value of learning about the practice of politics from a master of the art is that it teaches one what *not* to do. The view of politics that emerges is ambivalent, and Djilas does not try in this very personal view of Tito to engage in a general analysis.

There is also some ambivalence in the tone in which Djilas speaks of Tito, his achievements and his failings. That Djilas should have mixed feelings is scarcely surprising; what is remarkable is the objectivity of his view and the lack of personal bitterness. The generous spirit which animates this memoir is illustrated by the attempt to sum up Tito's character and attributes in chapter 10, which pictures a virile man possessed of great reserves of energy and concentration and passion; sometimes rash, but shrewd in his political calculations; a pleasant companion and a leader who allowed his colleagues autonomy, but a man who always set himself apart and once in power claimed special recognition and privileges. Djilas comments in this chapter on Tito's personal vanity and his penchant for self-mythologizing, but with a certain indulgence for these failings. Elsewhere he is more sharply critical: demolishing Tito's claims to military skills, commenting on Tito's autocratic style of leadership and sardonic about Tito's often clumsy attempts at imitating the customs and life style of Serbian royalty. There is a very funny anecdote about Tito's decision to adopt the royal custom of becoming "godfather" to the ninth boy born to families under his rule, despite the difficulties of being an atheist godparent, until the demands of important godchildren became too much of a nuisance.

Djilas is predictably censorious about Tito's luxurious and flamboyant manner of living and dressing. His writings display a puritanical streak, and he began to get into trouble with the regime in 1953 when he attacked his comrades in print for their opulent life style. His distaste is also in part aesthetic - he dismisses Tito's yen for elaborate uniforms as "nouveau riche". But one of the attitudes which comes through in this book, in a chapter discussing the pomp and ceremonial with which Tito surrounded himself, is a lively sense of the ridiculous. I particularly liked his wry account of the problems he had in staging May Day parades. Djilas does concede a point often made in the West, that Tito's desire for the good life made it easier for ordinary citizens to pursue it too. "The main fascination of this book lies in the personal detail that Djilas is able to supply from his own experience. Some of this detail bears on the theme of the difficulties and corruptions of power. Djilas recounts how Tito refused to sign death warrants personally, delegating direct responsibility for ordering capital punishment to another authority. He also recalls how, during a discussion of the possibility of the Soviet Union launching an attack on Europe and leaving Yugoslavia ill left, Tito said that it had crossed his mind that "if it comes to something like that, we should provoke an incident", and then quoted the adage "politics is a great whore".

Other detail throws light on very important areas of postwar politics. Djilas gives examples of the brutality of the suppression of anti-communist guerrillas after 1945, and relates how, as late as the winter of 1948, leaders of a minor rebellion by Muslim peasants, who fled into the forest, were tracked down and shot. He also goes into some detail about the atrocious treatment of the 15,000 or so suspected "Communist" who passed through the internment camp at Goli Otok after Tito's break with Stalin forced him into repression of Yugoslav communists faithful to Moscow. Even in retrospect Djilas accepts that imprisonment of

Communist was necessary, but reflects on the way in which he and his colleagues in Belgrade for a long time evaded knowledge of what was being done in Goli Otok, though eventually they did act to curb the brutality of the camp guards.

It is particularly interesting to have Djilas's own account of his expulsion from the Central Committee in 1954 for advocating that the Party should disband itself. He concentrates not on the political and ideological issues, but the personal stresses and reactions, giving his assessment of the attitudes of Kardelj, who had also been pressing for democracy and liberalization but now led the attack on Djilas, and of Ranković the police chief, who had never pretended to enthusiasm for the democratic reforms. It is Ranković, who was dismissed in 1966 for abuse of his police powers, who comes better out of this account. But Djilas does not record, and probably has no sympathy for, Kardelj's role within the party hierarchy in pressing for the liberal reforms achieved during the 1960s.

Djilas comments on the crisis of 1954. "The quarter", Tito, Kardelj, Ranković and I - which had guided the Party through great storms and set on its independent course was disintegrating. So was Party unity and trust". It is in the context of his very direct and vivid recollections of this crisis that he makes one of the most revealing judgments about Tito's character and about their relationship: "I like Tito, I was adamant in defending my creation. At our last meeting, I said to him: 'I understand. You created something and now you defend it. I have just begun'." Djilas goes on to record: "Tito softened, but only for a moment, then proceeded to settle accounts".

April Carter

April Carter is a fellow of Somerville College, Oxford.

## Oxford University Press

## Main Currents of Marxism

Its Origins, Growth, and Dissolution  
Leszek Kolakowski, translated by P.S. Falla

*Main Currents of Marxism*, published in 1978, is already regarded as essential reading for all students of Marxist history and philosophy, and as a standard work of reference, and its appearance in Oxford Paperbacks will be widely welcomed. 'The most accessible account of Marxism that we now have... It is difficult even to imagine a better book.' *The Times*. 'Undoubtedly the most complete and intellectually satisfying survey of Marx's and Marxist thought ever written.' *The Listener*. 'A great intellectual achievement.' *Bernard Crick in The Observer*. Three volumes £2.95 each. Oxford Paperbacks forthcoming.

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C.L. Ten

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David S. Bell

David S. Bell is lecturer in politics at the University of Leeds.

## French economic management

French Politics and Public Policy  
edited by Philip G. Cerny and  
Martha A. Schain  
Princeton Press, £12.50  
ISBN 0 903804 44 1

One of the astonishing features of postwar Europe is the expansion and modernization of French society and the French economy. To people who know the history of pre-1945 France with its agricultural, industrial and social sluggishness this has been one of the major revolutions in the West. Especially when contrasted with Britain which now seems to exhibit many of the ills which once seemed to be so particularly French: for observers of French society the efficiency of French technological, administrative, and industrial management in the contemporary world are facts which need close investigation and this, broadly, is what *French Politics and Public Policy* sets out to do.

Although the modernization of France is a postwar phenomenon the characteristic stature of de Gaulle has tended to draw attention to the Fifth Republic, which was, after all, the state which France caught up with through the overtook Britain on most social indicators. It is this fact which makes the French political decision-making system in order to discover which features have contributed to the modernization.

Top of this list comes French economic planning which has been recognized as essential to modern development in Europe for providing a balance between laissez faire and dirigisme, and outright state control. But what is the true

importance of the French plans? Diana Green, who deals with this issue in the book, is sceptical. The planning commissariat is a very small organization, and the main impact of the plans is thought to be psychological: by contributing to the general optimism of French business life and by providing visible indicators of success, they reinforce confidence in the economy and encourage investment. This is a very difficult notion to test, but most evidence so far gathered does not in fact support it.

Prime Minister Barre, a free-market economist was, as might be expected, dubious about the value of the plans, while the approach taken by Giscard as Finance Minister and by the Giscard-Barre tandem (in the period after 1976) has been compared to that of the Thatcher Conservatives. Phil Cerny and Diana Green in their essay on French economic management conclude that economic liberalism has been softened in practice but that there are still frictions within France's governing presidential majority on these issues. In outline the Gaullists take a view which is paralleled by "Selon" Conservatism in Britain while Barre stands on a different bedrock, though there are differences that do not run deep enough to bring the government down.

This is unlike the divisions on the Left over economics which, as Kesselman argues in an essay on the Communist party, are profound and lie behind the break-up of Left Union. Martha Schain, in an extremely interesting piece of research, adds to this by showing that Communist economic and spending priorities in local government are distinctive. (Communists



## BOOKS

## Murder, bigamy and coincidence

The Maniac in the Cellar: sensation novels of the 1860s by Winifred Hughes  
Princeton University Press, £8.40  
ISBN 0 691 06441 5

In his *Condensed Novels* Bret Harte produced a magnificent parody of the sensation novel, and Winifred Hughes quotes him at length at the head of her chapter on M.E. Braddon and Mrs Henry Wood, the ladies who produced respectively *Lady Audley's Secret* and *East Lynne*, the top two bestsellers in English nineteenth-century fiction. She notes his inclusion of all the essential devices of the genre:

passions, secrets, murder, bigamy (not to mention trigamy), dark misgivings, and a family curse... the wicked and tortured heroine, a titled lady burdened with an inconvenient lower-class husband;... her dashing lover, the disguised criminal-hero, practised in seduction and the forging of wills. There is even a railway accident, a crucial occurrence...

This list suggests one question: why did the same old recipe appeal so much and for so long? And why did the genre make such a sudden and full-blown appearance in the 1860s? As early as

1864 the *Edinburgh Review* could comment that:

two years ago nobody would have known what was meant by a Sensation Novel; yet now the term has already passed through the stage of jocular use... and has been adopted as the regular commercial name for a particular product of industry for which there is just now a brisk demand.

Miss Hughes's last chapter on the influence of the form refers to Trollope's *The Eustace Diamonds*, certainly his fullest move in the direction of sensation (though there is also enough incidentally elsewhere), and more fully to Hardy, though insufficiently because the possibilities here would have taken her outside her brief. There are also frequent passing references to Dickens whose importance Miss Hughes acknowledges in the preface.

She reveals there that her study began with him but that he quickly wrote himself out of it. This is a pity because a successor to Walker Phillips's *Dickens, Reader and Collins* (1919), where the three novelists were rightly linked together, is badly needed, both because Phillips was not really convincing in the connections he found between them, and also because the lapse of sixty years has vastly changed our

critical perspectives and understanding.

In *The Maniac in the Cellar* we have this needful new treatment of Reader and Collins with the addition, as I have indicated, of Mary Braddon and Mrs Henry Wood. The studies of individual authors are preceded by chapters on "The Sensation Paradox" and "The Sensation Novel and Victorian Theories of Fiction". There is much in this book that is in the best sense critically provocative, and nowhere is this better shown than in this latter chapter. Miss Hughes notes how much the sensation novel represented a challenge to the predominantly moralistic assumptions of Victorian criticism. She argues indeed for a commonality of interest that blurred social distinctions much as television has done in our own day.

She also sees the form as disruptive of the accepted categories of the novel, finding that it defies the probabilities of realism and with that the expectations about plot and character. "In the world of the sensation novel, where accident has been canonised in place of system, anything can happen, while the characters have no chance of learning the rules." This sense of disorder, which overthrows realism, is also responsible for confounding idealism,

producing, as Northrop Frye has noted, that sense of absurdity in the effects of the form which enables him to characterize it as anarchy.

The proximity of chaos is what makes the sensation novel both disturbing and exhilarating, but it is also what can so easily make it silly. We fear chaos so much that we take a lot of convincing about its reality before we are prepared to recognize it. This is where melodrama comes in—and this is where also it sometimes makes us laugh in awareness of its exaggeration and unreality. It is where also, as in Hardy, it can be enveloped in tragedy.

Miss Hughes does not discuss the implications of melodrama fully, but again that is because she keeps firmly and elegantly within her brief, seeing the sensation novel as only part of melodrama, itself something vaster and simpler. It would also have required a bigger book fully to have answered the questions I posed near the beginning of this review. As it is, this is a perceptive treatment of the subject, unpretentious but illuminating, intelligent and suggestive.

Arthur Pollard

Arthur Pollard is professor of English at the University of Hull.

## Bryusov

The Diary of Valery Bryusov 1893-1900 with reminiscences by V. F. Khodasevich and Marina Tsvetayeva edited and translated by Joan Delaney Grossman  
University of California Press, £9.50  
ISBN 0 520 03858 4

The name of Valery Bryusov (1873-1924)—poet, translator, literary critic, editor—is inextricably linked with the beginnings of the modernist period in Russian literature. Bryusov wanted to be remembered in two lines of a history of literature, ultimately he will have earned more, not so much for his creative gifts as for his success in channelling a new poetic and aesthetic movement in its initial stages into something akin to a literary school.

Unlike his younger and much more gifted contemporaries, Alexander Blok and Andrei Bely, Valery Bryusov was a self-made man of letters, a self-appointed leader of Russian Symbolism whose ambition was to transplant culture from "progressive" Europe. Anticipating a change of sensibility, he ruffled the dormant atmosphere of the Moscow literary establishment with a few decadent poems and achieved at first a *succès de scandale*. He soon became one of the most influential literary figures of the first decade of this century, setting high standards, fighting battles for the new art, opening new horizons with his innovative themes matched by technical mastery, using his organizational and editorial talents to make of *Voy ("The Balance")*, 1904-9 the foremost Symbolist journal and to group around it the best there was in modern European and Russian literature.

Among the various autobiographical writings of Bryusov, the most important are his diaries for 1893-1910 published in Moscow in 1927 (reprinted by Bradua Books in 1972). The Russian edition is by no means the complete text of the diaries preserved in the Moscow archives, and the present translation is a truncated and abridged version of the above. The editor has excluded the first two years of Bryusov's diaries and has ended them in 1905; moreover she has introduced many ellipses, thus adding to rather than diminishing the inherent fragmentariness of the entries. Nevertheless, despite the numerous irritating square brackets, what is left enables the reader to get a clear impression of the Moscow literary milieu at the turn of the century and of the personality of Bryusov himself—an impression which does not always tally with that of the poets of the Silver Age and Tsvetayeva's vivid but hardly objective reminiscences are also included in this volume.

The diary itself does much to lighten the rather forbidding image of the man who has been dubbed the "little Napoleon" of Russian Symbolism. Primarily the picture is of a young student set to shock in order to attract attention, fully aware of his pose, able to laugh at himself for showing off his erudition, describing himself as "a journalist by calling" and at last, after a "need for escapism" from his rational self.

An appendix of 21 poems in translation supplements the text, and though the selection is unavoidably arbitrary, it is helpful to the reader to have some examples of Bryusov's work. The editor's introductory essay is in clear and competent English and the glossary of proper nouns, though not detailed enough, is a welcome help. There are some careless mistakes which could have been avoided, but these are minor blemishes. This is a useful and enjoyable volume.

Georgette Donohue

Dr Donohue is lecturer in Russian literature at the School of Slavonic and European Studies, University of London.

## BOOKS

## Acupuncture explained

Calentia Lancelotti: a history and rationale of acupuncture and moxa by La Gwel-Djen and Joseph Needham  
Cambridge University Press, £45.00  
ISBN 0 521 21513 7

It is rare and brave indeed to undertake to write a history of so contentious a subject as acupuncture. This work is supremely successful, both authors having a profound understanding of the development of the Chinese sciences. They skate elegantly over the space that lies between the "essentially medieval" thinking of the traditional practitioners of China and the methods of Western-inspired investigators who are attempting to describe the nervous system's responses to the insertion of needles. Neither side is ignored or compared; rather, both are congratulated for their attempts to explain how many diseases may be treated by applying the noxious stimulus of the needle (acupuncture) or heat (moxa).

The authors remind us that there have been a number of misunderstandings in the West about acupuncture. It has nothing to do with occult influences, psychic powers or parapsychology and does not involve the pralises and those who believe these things. Furthermore, it does not depend entirely on suggestion or hypnotic phenomena and is not contradictory with the findings of Western medicine.

Although Western laboratories have only just begun to explore the subject, a number of rational explanations have been cited for its recent and perhaps most spectacular phenomenon—the relief of pain during major surgery in man and animals. The authors, in common with many other Western observers, witness such remarkable events as a man having a tumour cut from



The 40 acupoints of the Chelonegic channel. Intentional Yang-Ming acupoint depicted in the Lei Ching.

his jaw with a thread-saw while remaining conscious, yet showing no signs of pain. His only apparent form of relief was provided by the electrical stimulation of two needles: one inserted into his neck and the other into his head.

The Chinese are now able to admit that an undisclosed number of patients who were not expected to do well were excluded from such trials and were given conventional forms of anaesthesia. Some of the early reports of 75 per cent success rates, for example, were the results of selecting the chosen few and cannot be said to apply to the population as a whole. The authors' probing into this delicate question two years ago revealed an estimated overall success rate of between 15 and 30 per cent, which many authorities would consider

generous today. However, as a result of American, British and Chinese work we have an explanation: acupuncture stimulates the central nervous system to produce certain morphine-like substances that may in turn provide the pain relief required to sustain major surgery in relative comfort.

The increase in the knowledge of the effects of acupuncture on various activities in the nervous system is described as a milestone in the modern development of the subject. This is probably only the beginning of a new chapter in an old story, for acupuncture was developed in a civilization quite different from our own and already had literature two thousand years old at a time when Western scientific attitudes to medicine were just beginning to be fashioned.

The authors describe Chinese conjectures about the subtle interplay of influences arising from the various internal organs and the ever-changing phenomena existing in the outside world. They paint fascinating comparisons between Chinese and European pre-Renaissance medical thinking. In many ways, before the sixteenth century at least, the Chinese had a superior knowledge of the mechanisms of the body. It is possible, for example, that William Harvey's *Exercitation de Motu Cordis et Sanguinis*, which decried traditional European beliefs with his notion that blood flowed in a true circulation, was written in the knowledge that this was standard doctrine in China two millennia before him.

Anyone who wishes to know more about this subject will be delighted by so beautifully constructed a work. It will be remembered among the honoured chronicles of medicine.

Alexander Macdonald

Alexander Macdonald is a clinical assistant to the Pain Relief Clinic, Professorial Department of Surgery, Charing Cross Hospital, London.

## Fragments of control theory

Introduction to Control Theory, including optimal control by David Burghes and Alexander Ellis  
Ellis Horwood: Wiley, £19.50 and £6.90  
ISBN 0 85312 181 8 and 254 7

Control theory is now an integral part of any undergraduate programme in applied mathematics which would claim to be in touch with contemporary trends. Unfortunately, acceptance of control theory into the syllabus has been slower than had been hoped by enthusiasts a decade ago. Currently, about 15 universities and college departments in Britain participate in a scheme, run by the Control Group of the Institute of Mathematics and its Applications, for interchanging past examination papers from degree courses. A definite need exists, therefore, for textbooks in this growing area, especially at an introductory level.

The topics are by now fairly standard, and there are quite a number of existing books aimed primarily at students, but nevertheless providing a treatment suitable for a wide range of needs. Any new offering must therefore be looked at with a more critical eye than perhaps has been the case in the past, when teachers of the subject were so grateful to have anything available in print that they were willing to overlook shortcomings. Both Burghes and Graham are authors of previous books in this series published by Ellis Horwood, who incidentally are to be congratulated for their vigour in promoting one of the few British mathematical series which aims to compete with the American giants.

In the light of the above remarks, this book is disappointing. It displays some signs of ambivalence, beginning with the title. As it implies, we are in a somewhat awkward position, being presented with a bound volume containing two almost distinct books. The quality extends to the actual presentation of the material. For example, in the middle of this chapter on stability there is a two-page digression on quadratic forms.

This interruption of the development of a new topic with revision of standard mathematics is repeated on several other occasions. This is often how one proceeds in the classroom, but in a book it is tiresome. The common practice of collecting together all the relevant mathematical techniques either at the beginning or end of the book is to be preferred. Indeed, the authors do not seem to have been able to make up their minds in this respect, since they also include two appendices on basic algebra.

The book begins with a short chapter on descriptions of systems using ordinary differential equations. The second chapter is mainly a review of conventional Laplace transform methods, the final one-third being on transfer functions and block diagrams. The balance seems wrong here, since the student is familiar with transforms this is a waste of time; if not, then he will need a much fuller treatment. The next chapter introduces state space representations, but in view of its importance more care should have been taken. For example, the definition of decoupling on page 51 is not the usual one, the introduction of the minimum polynomial of a matrix on page 64 is irrelevant, and the diagonalization formula on page 74 reproduces that in appendix 2.

Chapter four briefly covers classical material on transient and steady-state response from transfer functions. Stability is discussed in chapter five, including the Routh test (but with no discussion of critical cases), Liapunov theory (but only for linear systems, whereas the real interest lies in non-linear applications) and the Nyquist criterion (including some material on conformal mappings). The fundamental notions of controllability and observability are not given the thorough treatment that they deserve in chapter six, and indeed some of the definitions themselves are unsatisfactory. Pole assignment by linear feedback completes part one.

The "optimal control" part of the book is more appealing. Chapter eight gives some interesting illustrative examples, followed by chapters on classical calculus of variations, on the Hamiltonian approach for unbounded controls, and on Pontryagin's principle for bang-bang problems. These methods are then applied to the models described earlier. The book closes with a chapter on dynamic programming, but this is explained by way of problems from the field of operations research, rather than of control. It is a pity that the well-known problem of minimizing a quadratic performance index for a general linear system is not covered, since this affords a good opportunity for linking up with the ideas of controllability, observability and stability from part one.

The number of problems for solution by the reader is fairly small, but the provision of worked solutions (not just answers) is commendable. A general criticism, however, is the absence of discrete-time models. These are becoming increasingly more important, and it is instructive for students to appreciate the parallel development of results for continuous and discrete time systems. This would have fitted in well with the simple economic models which are discussed, so the authors have missed another opportunity here.

In the preface the authors emphasize that they wish to concentrate on conceptual, as opposed to mathematical, aspects of the theory. Unfortunately, after reading the book one is left with an impression of fragmentation. A feeling for the exciting and characteristic ideas of control as a coherent subject does not come over. There are many better books available both on linear systems and on optimal control, and this work can only be recommended as supplementary reading for beginners in the field.

Stephen Barnett

Stephen Barnett is professor of applied mathematics at the University of Bradford.

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## BOOKS

## Birds of a feather

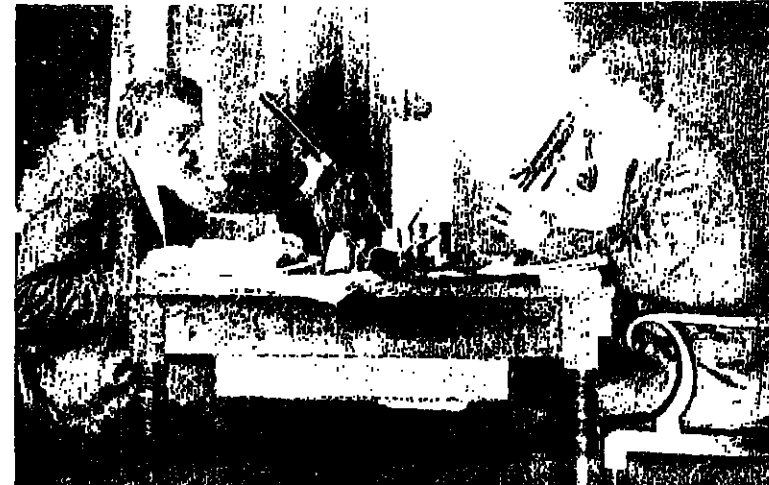
**The Age of Birds**  
by Alan Feduccia  
Harvard University Press, £12.00  
ISBN 0 674 00975 4

This book is really a series of eight essays on aspects of the origin, evolution and phylogeny of birds, written and illustrated in a style attractive to the general reader. It is therefore sparsely designed, with wide margins and an abundance of black-and-white photographs, drawings and diagrams.

The first chapter begins with a description of the unique adaptations of the bird's skeleton and musculature and shows how characteristics must be analysed in deducing evolutionary relationships. Feduccia then recounts the story of the discovery of the five specimens of *Archaeopteryx*, the Jurassic link between reptiles and birds. He shows how its timely discovery made it influential in the acceptance of Darwin's ideas on evolution, for its beautifully preserved impressions of undoubtedly fully evolved feathers lie undisturbed around a skeleton that still shows little trace of commensurate modification of the skeleton.

In the second chapter, Feduccia briefly discusses the problem of identifying the reptilian ancestors of *Archaeopteryx*, and explains the two rival theories. The first would derive birds from a type of small, fast-moving dinosaur known as a coelurosaur (which is known from rocks the same age as *Archaeopteryx*), whereas the other theory suggests that they evolved directly from the much earlier reptiles that also gave rise to the whole radiation of dinosaurs.

This is followed by a chapter in which Feduccia discusses the different theories on the evolution of flight. The most popular and simple view is still that *Archaeopteryx* arose from a reptile that, like many forest-dwelling creatures today, found that gliding was the most direct and energy cost-effective way of getting from tree to tree. The main alternative theory today is 'Ostrom's', that feathers first evolved as a sort of butterfly-net and that *Archaeopteryx* ran after its insect prey rather than climbed and flew. Feduccia points out that both the shape of the feathers of *Archaeopteryx* and its possession of a furcula (wishbone) seem clearly adapted to flight, and therefore do not support Ostrom's interpretation.



Robert Kidson and David T. Gwynne-Vaughan examining fossil plants from British carboniferous rocks in about 1920. Taken from *The Fossil Hunters*, in search of ancient plants, by Henry N. Andrews, professor emeritus in the department of biological sciences at the University of Connecticut. The book contains a wealth of information - biographical, historical and botanical - about the major figures involved in the development of palaeobotany. It has been published by Cornell University Press at £17.

The evolution of flightlessness provides the subject for a later chapter, with special emphasis on the evolution and interrelationships of the large flightless birds usually placed in a single group known as the Rallies. Feduccia gives a brief account of some of the characteristics that suggest that this is a related, monophyletic group, but quotes the diversity of their pelvic structure and feathers as evidence against any such fundamental unity for the group.

In the remaining four chapters, Feduccia discusses aspects of the evolution of the Cretaceous toothed birds and of divers, of shorebirds, Ducks and waders, of birds of prey, and, finally, the rise of that great diverse group, the land birds. His own studies on the structure of the middle ear ossicle of birds have provided new insights into the problems of classifying this latter group, which above all others justifies the title of the book.

Feduccia writes clearly and well, and the book as a whole makes enjoyable reading. There are nearly 200 photographs, drawings and diagrams, most of which have been well designed or chosen - though some of the photographs of geological localities or of fossil specimens in situ are not very informative. The author has explained most of his topics in an historical fashion, tracing

the discovery of specimens and the controversies over their nature and significance. He provides nearly 200 references to the literature, including both semi-popular books and research publications.

The scope of the book is limited, not only to the eight general topics selected by the author, but also by the fact that these topics are concerned almost exclusively with aspects of the evolution and adaptation of the skeleton and musculature of birds - there is hardly a mention of, for example, their physiological adaptations or of their unique respiratory system. The non-specialist reader would also have been helped by a few pages giving a general account of the diversity of living birds, so that he could gain some idea of how much of avian evolution has been explained to him and how much remains as a vague flock of vari-coloured feathery look-alikes.

With these minor reservations, Feduccia has written a book which should appeal to the general reader and which will also provide an interesting and attractive introduction to avian evolution for more specialist students.

Barry Cox

Barry Cox is professor of zoology at King's College, London.

## Fossils retouched

**Elements of Palaeontology**  
by Claude Babin  
translated by Nicola Orris  
Wiley, £19.00 and £7.95  
ISBN 0 471 275 77 8 and 76 X

The editor's introduction gives the main purpose of this book as increasing the choice of texts for undergraduates studying palaeontology. In this it is successful, as the approach is quite different from other texts available in English. Babin's original aim was to provide a general text, highlighting palaeontological problems by specific examples while leaving much technical detail to the monumental works such as the seven volumes of Piveteau's *Traité de Paléontologie* (Masson et Cie, 1952-67). His fundamental philosophy is "that education should be oriented towards the arousal of a critical outlook... rather than towards the compilation of rapidly outdated data". However, it is still necessary for the student to acquire the basic language of his subject before he can appreciate the problems waiting to be solved. This present text does not provide this basis, nor is it intended to. It can therefore at best be an ancillary volume to other texts.

What it does provide is a stimulating account of some aspects of palaeontology which are not covered in other English texts. A short history of palaeontology is followed by chapters on fossilization and methods which provide a very good summary of techniques. On nomenclature, he is critical of the primitive typological concept of species while being not wholly won over to a statistical approach. He shows here an admirable pragmatism. The longest part of the general section is devoted to palaeogeology which takes up nearly a quarter of the volume. The autecological section is very interesting and there are good comments on the reliability of data.

The layout of the figures in this part and that on communities is often poor in relation to the text and a number of the figures have not transferred well to what is generally a smaller format. This palaeogeological part is, however, well worth careful study; again, some caution is mentioned at the end. The stratigraphical section is quite short but makes the important point that rapid evolution is often linked to local

occurrence which is in direct contrast to the wide geographical requirement of a good "index fossil".

Part two, which occupies about half of the book, is entitled "Some facts of evolution" and in 12 chapters, mostly short, picks up various aspects of evolution as seen in different groups of plants and animals. The major groups found as fossils are all dealt with and some descriptive terms introduced where required, for example, for discussion of septal insertion in corals.

The first of these chapters, on the origin of life, is a nice account of ideas and includes references up to 1977. The other chapters have similarly been updated in places. Since many of the ideas on evolution in general come from the study of vertebrates, it is no surprise that the chapter on them is much longer than the others. Fossil man is given 11 pages, almost as much as all the cephalopods.

The chapter on echinoderms is comparatively short and is largely devoted to the controversial relationships of echinoderms and chordates. "This speculative aspect of palaeontology should not lead the neophyte astray; comparisons of ideas of this sort are, on the contrary, extremely stimulating to the mind and thus to research."

The final part consists of some 30 pages on palaeontology and evolution, in which the modes and mechanisms of evolution are treated. As noted in the preface, this part has been "only lightly retouched", as it is not possible in only a few pages to deal with the current explosion of ideas. However, there are references to fairly recent papers and the general statement of principles remains valid. There are numerous figures, both line-drawings and photographs, throughout the volume.

I can strongly recommend this book as a supplementary text to all who teach palaeontology even if they disagree with parts of it, and to students who might feel that the study of fossils could be an intellectually stimulating exercise, not just the parrot-learning of the one thousand best British fossils.

Isles Strachan

Isles Strachan is lecturer in the department of geological sciences at the University of Birmingham.

## Statistical handbook

**Applied Statistical Techniques**  
by K. D. C. Stoodley, T. Lewis and C. H. Stalport  
Ellis Horwood, Wiley, £16.50 and £6.90  
ISBN 0 853 12 157 5 and 174 5

This book is for non-statisticians who use statistical methods in their work. As such, it deals with the standard situations of data analysis, provides recipes rather than reasons and requires minimal mathematics from the reader (who could generally manage without calculus if necessary). However, those whose data require closer probing, or are less routine, should read beyond its coverage; references are given at the end of each chapter. Multivariate techniques are not included.

The book begins with a summary of the basic descriptive statistics and inference assumed in the sequel of six self-contained chapters (two to seven). Chapter two deals with least squares regression on one or two independent variables (which may be  $x$  and  $y$ ); and there are good sections on residual analysis and the use of computers for larger or more complex examples. Chapter three, on simple experimental design, covers one-way and unreplicated, and equally replicated two-way layouts with fixed and random effects, and Latin squares; it ends with two to the power of  $k$  factorial experiments, excluding missing observations and unbalanced data. Next come non-parametric tests (sign, Wilcoxon, Mann-Whitney and Moses), ending with rank correlation.

Chapter five introduces quality control, including single, double and sequential batch inspection plans and CUSUM charts. Chapter six discusses simple and stratified random sampling and, briefly, quota sampling, including the analysis of results in terms of marginal distributions, contingency tables and correlation, however, other methods, and practicalities such as choice of frame and non-response, are omitted. The final chapter on forecasting covers the composition of a time series using moving averages, long-term forecasting models and adaptive forecasting, but not serial correlation.

Notation, especially important for users unconcerned with deriving formulae, is generally clear, but the departure from the usual convention of denoting random variables by capitals must be noted. I found no misprints. Useful worked examples are provided; problems are given throughout the text as well as exercises at the end of each chapter; and there are answers to both.

In short, this is a readable introductory handbook of the more common procedures of analysing statistical data, provided the user reads further when occasion demands. It can be recommended.

K.L.Q. Read

K.L.Q. Read is lecturer in mathematical statistics at the University of York.

## Psychological techniques

**Experimental Psychology: research methods and statistics**  
by R. B. Burns and C. B. Dobson  
MTP Press, £5.95  
ISBN 0 85200 369 2

**A Practical Guide to Behavioural Research: tools and techniques**  
by Robert Sommer and D. B. Sommer  
Oxford University Press, £9.50 and £3.50  
ISBN 0 19 502 691 8 and 692 6

Fame and fortune would seem to await anyone who wrote a textbook that took the drudgery out of statistics for social scientists. That at least is one explanation for the burgeoning ranks of introductory books on statistics and methodology that line the shelves of university libraries and bookshelves. Moreover, it is the one book that every social science student can be guaranteed to buy, in the usually mistaken belief that the examinations in statistics and methods are the most intractable he or she will meet.

Books on these topics tend, however, to have a clone-like quality and are often indistinguishable in terms of their formal contents and pedagogical assumptions, varying chiefly in their quota of forced joviality. Another textbook to join the ranks could be justified either by the authors bringing some new statistical techniques before a wider public or presenting traditional ones in a radically new and accessible form. Unfortunately Burns and Dobson do neither of these things. They tread a conventional path largely through statistical territory but fail to achieve the conceptual clarity that must be the aim of an introductory text.

In introducing the book, the authors assert that "essentially the method in all the sciences is the same, only the content varies". The student accepting this bland assumption is liable to try to assimilate one of the grown-up sciences (like physics, and to end up disillusioned, embarrassed or both. Throughout the book their ideas are given a simplifying and misleading gloss or are left hanging in mid-air with

no context in which to develop them. It is announced that "a hypothesis is a hunch"; so it may have been for Roget, or Hercules Poirot, but this invites the kind of conceptual wooliness that a student can do without. The concept of interaction is mentioned but not explained, and a fuss is made about the assumptions of parametric tests but no guidelines are given as to how they may be assessed or even where to look for more on this seemingly crucial problem.

The book has too many mathematical and statistical uncertainties for comfort. Algebraic conventions concerning the use of brackets and signs are floated, and some of the statistical ideas are wrong. Null hypotheses are not directional; inequality of variances is not a signal to use a nonparametric test for related samples; and it is not true that 10 per cent of any population lies one standard deviation beyond its mean. Psychologists too will be disappointed at the slim battery of examples used, including the "problem" of whether men prefer blondes.

The books begins with basic descriptive and inferential techniques, and this is where most of its flaws lie. It does, however, present a more assured treatment of reliability and validity, attitude measurement, and so on. This is the best of the book, but taken as a whole it is a pale shadow of the classic textbooks like Guilford's.

Whereas Burns and Dobson put most of their efforts into statistics and least into other methodological and practical matters, Sommer and Sommer nearly reverse this ratio of effort. Since they set out to provide a practical guide, the Sommers fittingly concentrate on the nuts and bolts of behavioural research.

The book is written for a North American readership, but this grates less than it often does with imported undergraduate texts. The style is brisk, and although it is quite a bit more tedious than it should be, it is more illuminating advice. The authors waste no time with the usual apologia about their subject matter having scientific status, and

they wade in with a persuasive advocacy of what they term a "multimethod approach".

Social issues, they contend, are better tackled by several methods than one. This approach, which most social scientists would probably respect, is nevertheless not one which has sufficiently wide currency in educational practice, resulting in a premature methodological specialization and a blinkered attitude as to how questions may be answered.

The Sommers argue that broad practical experience serves to make researchers aware of the options open to them and enable them to read with insight and understanding the literature of neighbouring disciplines. Students are therefore expected to get their hands dirty with observational, questionnaire, experimental and interview methods as the major options, and a further tempting array of other procedures including case study, content analysis, archival measures, and simulation.

Cautionary but sympathetic advice is given about ethical aspects of behavioural research; this thorny area is illustrated by reference to the ethical codes of US professional associations, which take a detectably more stringent and intrusive line than their UK parallels. The student also learns how to do a literature review, is peremptorily shoved through some statistical hoops, and is finally shown how to write a research report.

The book is out of the ordinary, and I hope that eclectic stance will find favour. It will have most appeal in relation to a course with a strong social psychological element, or one with established interdisciplinary connections. It will not appeal, however, where the practical options are foreclosed, for instance, in favour of a strict experimental approach, while the student is still working out where the library is.

P. J. Barber

P. J. Barber is lecturer in psychology at Birkbeck College, London.

## Enthusiasm for cognitive psychology

**Cognitive Psychology and Its Implications**  
by John R. Anderson  
Freeman, £8.10  
ISBN 0 7167 1197 4

"This is an exciting time to be a cognitive psychologist," states the author in his preface, and his style and the speculations in the text certainly give an indication of his enthusiasm. John Anderson of Carnegie-Mellon University represents the psychological equivalent of David Attenborough or John Kenneth Galbraith in terms of his enthusiasm and commitment to issues concerning cognition. There is no disavowal of scholarship here, for Anderson is very much a part of the debates he presents.

I have a lot of time for enthusiasts, and I have a lot of time for Anderson's view of cognitive psychology, particularly as it comes from the same university as Allen Newell's gloomy forecast of ten years ago. At the outset, however, it must be said that this is not the introductory text which it claims to be. It does not give a representative sample of the issues and ideas discussed by contemporary cognitive psychologists. The treatments are at best parochial, and was most often personal, at the expense of issues which other writers would consider to be essential to a general outline such as this.

Not that it doesn't have the makings of an introductory text, for the surface structure of a guidebook is very much in evidence. Headings of the type "the problem", and "how to use this book" proliferate, and the "summary" and "general conclusions" accompany each chapter which leaves the reader with the impression that the book is a guidebook to a guidebook. The headings of the type "the problem", and "how to use this book" proliferate, and the "summary" and "general conclusions" accompany each chapter which leaves the reader with the impression that the book is a guidebook to a guidebook.

The single chapter on perception and attention not only fails to discuss the concept of awareness but is also a serious fault in failing to review current research on the recognition of words. The cognitive processes involved in the transformation of a printed word into a comprehensible idea are the subject of

an afterthought - and cognitive psychology is still in need of the public relations exercise of a description of non-laboratory behaviour in terms of current theory.

The heavy treatment of the propositional basis of the representation of knowledge in the mind will prove to be a useful summary of Anderson's theoretical position. His speculative extensions of the propositional model, which is concerned with the description of the units with which we build an understanding of words and concepts, into the realms of memory, language, and problem solving, make excellent reading and are highly recommended. They are, however, more appropriate to an advanced text, and are out of place here.

Anderson identifies three major influences upon our recent attempts to describe human mental processes - the human performance studies deriving from the Second World War, studies in computer science and artificial intelligence, and the linguistic analyses by Noam Chomsky. Perhaps it is appropriate for a North American to disregard the longer term influences of the German psychophysicists, but it is a serious error for him to ignore the contribution of Jean Piaget. The thoughts of William James are also of great value in contemporary analyses of mind, but Anderson seems to believe that the most recent findings are of the greatest value. Having identified his three influences it comes as something of a shock to find that 11 of Anderson's 13 chapters are dedicated to an approach which has its roots in artificial intelligence (AI).

The single chapter on perception and attention not only fails to discuss the concept of awareness but is also a serious fault in failing to review current research on the recognition of words. The cognitive processes involved in the transformation of a printed word into a comprehensible idea are the subject of

widespread debate, but are not represented here. The short discussion of reading skill, which appears elsewhere in a chapter on language comprehension, is dominated by an outline drawing of the human eye! This esoteric treatment is misleading in its diversion of the student away from the notion of what Ulric Neisser describes as "reading as externally guided thinking". Following the chapter on language comprehension is a novel and lively concluding discussion concerned with language generation and writing. This chapter again illustrates the inventiveness of Anderson's approach, but is entrenched in the notion of propositional codes and the jargon of production systems derived from AI.

If the best way of describing human cognitive processes is by analogy with machines, using AI concepts, then this book will undoubtedly be influential even though it deals with only one version of the propositional model. (Kitchin's predictably powerful model is neglected.) John Anderson's own version of "cognitive science" may be seen as being instrumental in bringing the machine analogy into clear focus, but we must beware of becoming so hypnotized by the language and concepts of AI that we lose sight of the original goals of cognitive psychology. If psychology is the science of mental life (an old Jamesian concept), then it surely must value the mind-brain problem and give an account of the phenomenon of consciousness. The new form of radical behaviourism in the guise of cognitive science is at risk of dismissing this vital human attribute as readily as did the practices of Watson and Skinner.

Geoffrey Underwood

Geoffrey Underwood is lecturer in psychology at the University of Nottingham.

## Planetary studies

**The Planets: the geography, geology and meteorology of eight "New Worlds"**  
by Peter Francis  
Penguin, £3.95  
ISBN 0 14 02 2053 4

**Interiors of the Planets**  
by A. H. Cook  
Cambridge University Press, £25.00  
ISBN 0 521 23214 7

Even a casual comparison of these two most welcome books would serve to highlight two major facets of the current problems of teaching planetary science. First, the subject is both broad and deep; and, second, it is not a trivial matter to find books written at a suitable level for undergraduate teaching.

Thanks mainly to the NASA missions of the past decade, there currently exist many tens of thousands of detailed photographs and numerous other kinds of less readily appreciated physical measurements of the Moon, Mercury, Venus, Mars, Jupiter, Saturn, Phobos and Deimos (satellites of Mars), Amalthea, Io, Europa, Ganymede and Callisto (satellites of Jupiter), and Mimas, Enceladus, Tethys, Dione, Rhea and Titan (satellites of Saturn). The science of comparative planetology was not too complex when, in the days before deep-space missions, it was confined to the Moon, a body with a relatively simple evolutionary history.

Now that we must consider so many bodies, some with substantial atmospheres and one with what may be the relics of a hydrosphere, the subject has grown to encompass the traditional disciplines of geology, geophysics, physical geography, geomorphology, sedimentology, hydrology, meteorology and climatology; furthermore, it is common to find that the boundaries between these subjects are less easy to define when we are considering planets other than the Earth and this serves as a reminder that these disciplines should not be applied in isolation to the Earth itself. A fact which modern Earth science courses, like those in my own department, emphasize at length.

Peter Francis's book is appropriately subtitled and is a most commendable attempt to come at a popular level, the results of the application of the many other disciplines I have already mentioned to the study of the planets and their satellites. Francis's thesis is that the public has more often been impressed in the past by the technology of space exploration than the pure science; and so his book is devoted almost entirely to summarizing scientific results.

A general introduction to the solar system is followed by chapters devoted to pre-Apollo studies of the Moon and results of the Apollo missions. Mercury and Venus receive a chapter each and the date from the most recent (late 1978) Venera and Pioneer missions to Venus are included; Mars merits two chapters, one devoted to studies up to and including the Mariner 9 mission and the other to the Viking orbiters and landers. The Pioneer and Voyager missions are the basis of a description of Jupiter and its satellites. Saturn, Uranus and Neptune are treated together; at the time of writing of this chapter, only the Pioneer 11 results were available for Saturn and these did not greatly improve our Earth-based knowledge of the planet. How dramatically things have changed in the past few months since Voyager I reached the Saturn system. The final sections of the book are devoted to meteorites, asteroids and comets and to the origin of the solar system.

I found only two points at which the factual content of the book was misleading: on page 327 the Roche limit is described as applying to a solid satellite when it is in fact applicable to a gaseous body (which could be an aggregate of solids but must have no cohesion); the section on stony meteorites on pages 361-365 clearly leaves the reader with the impression that all stony meteorites are chondrites possessing chondrules whereas there are in fact various kinds of achondritic meteorites.

Turning to matters of opinion, it is almost impossible to expect a reviewer to agree with every point of interpretation expressed by an author, particularly in a subject like planetary science in which new data are being added faster than the scientific community can easily assimilate them. As a result, I was pleasantly surprised by the small number of occasions (about one per chapter) on which I found myself dissatisfied in some way with the author's summaries.

The book is written in a conversational style which is generally quite pleasing and it should find a wide audience among general readers, sixth-formers and undergraduates. It makes an excellent introduction to the current state of knowledge of the planets for any science subject. Although it very rarely covers any topic in enough depth for a final-year degree course, I am recommending it as background reading to my third-year planetology students this year because it is relatively up to date (lacking only the Voyager Saturn results) and covers a wider range of topics in a single volume than any other comparable book.

If Francis's book exemplifies the breadth of planetary studies, then equally Alan Cook's excellent monograph emphasizes the depth in which some aspects of planetology can be treated. This book also illustrates one of the practical reasons for studying the planets. Thus if we are to understand fully the structure and evolution of the crust of the Earth (and its store of metals, minerals and fossil fuels) we must also understand the Earth's interior, the evolution of which is a function of the physical and chemical nature of the materials which accreted to form the proto-Earth some 4.6 thousand million years ago and of the laws of physics at high temperatures and pressures.

Two approaches are possible to the investigation of planetary interiors. One involves the construction of models for the early solar system, the prediction of initial planetary compositions, the assumption of the nature of the high-pressure physical processes and the prediction of current planetary structures. Professor Cook wisely rejects this approach as having too many imponderables and instead advocates the reverse of this line of reasoning. He begins by summarizing the known dynamical properties of planets (size, mass, density and gravitational field) and uses these properties to constrain the present internal density distributions. This information is combined with practical and theoretical knowledge of the properties of likely planetary materials to derive possible models of internal structures. The steps in the analysis are carried out with mathematical rigour and Cook makes a point of emphasizing, where relevant, the limitations of current knowledge and understanding.

The principal conclusion of the work, reached after a careful survey of what can be deduced about the interiors of both the silicate planets (Earth, Moon, Mars, Venus and Mercury) and the gas-giants (Jupiter, Saturn, Uranus and Neptune) is that there is quite strong evidence for the idea that the cores of planets condensed first from the primitive solar cloud to be followed later by the outer layers of the planets, probably after a period of loss of volatile compounds from the system.

This book will be of great value to undergraduates and postgraduates specializing in planetary geophysics and will also be appreciated by researchers in other branches of planetary science for the concise and logical way in which it summarizes the subject. There is a useful list of references, given separately for each chapter, and a comprehensive index.

Lionel Wilson

Lionel Wilson is lecturer in environmental sciences at the University of Lancaster.

The *History of Urban and Regional Planning: an annotated bibliography*, by Anthony Sutcliffe, has been published by Macmillan at £12.95. Although the bibliography involves studies in a wide range of geographical areas, the emphasis is on Western Europe and North America.

Turning to matters of opinion, it is almost impossible to expect a reviewer to agree with every point of interpretation expressed by an author, particularly in a subject like planetary science in which new data are being added faster than the scientific community can easily assimilate them. As a result, I was pleasantly surprised by the small number of occasions (about one per chapter) on which I found myself dissatisfied in some way with the author's summaries.

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## Algebra comes into its own

**Basic Algebra II**  
by Nathan Jacobson  
Freeman, £16.20  
ISBN 0 7167 1075 X

In the three centuries since Newton's day, analysis has risen to pre-eminence in mathematics. By the mid-nineteenth century it had developed into a powerful instrument, capable of manifold applications. By contrast, algebra, though its roots go back as far as for further, has never occupied a comparable position. All the more surprising is its spectacular development in the present century; besides sophisticated theories of groups, rings, lattices, and so on, we also have significant applications in physics, engineering, biology (genetics), coding theory and even linguistics. Nor have the applications remained at a superficial level; when in the late-1920s, enthusiasts applied group theory to study the "symmetry" of atomic systems, cynics observed that these results could also be obtained (at least in principle) by solving the wave equation for the system. But 30 years later, physicists had moved on to study the nucleus; here one was largely in the dark about the nature of the forces, and now had to rely on the algebraic symmetry principles for progress.

After the initial impetus from quantum mechanics in 1925, the most important landmark was the appearance of von Neumann's *Mathematical Foundations of Quantum Mechanics* in 1930, which recorded the lectures by Emmy Noether and Emil Artin, and in which for the first time the abstract

point of view was consistently followed. This book served not only as an introduction for succeeding generations of algebraists, but also as a model for many later textbooks. Meanwhile the subject had developed space, and there is now a vast amount to choose from in writing an algebra text.

This new book, by a distinguished American algebraist (who besides his fundamental contributions to the subject is known for his many excellent textbooks), completes a two-volume algebra course which in over 1200 pages covers a great deal of "basic algebra". A postgraduate student of algebra with any pretension to breadth of knowledge should know 75 per cent of the contents, but much of it will also be needed by budding specialists in other fields such as topology, algebraic geometry, and functional analysis.

The core of the book is ring theory, with chapters on modules, structure theory and commutative rings, especially Dedekind domains. The commutative theory particularly shows the strong influence of algebraic geometry; thus the Hilbert polynomial of a graded module is described, and the characteristic polynomial of a local ring. The treatment, however, remains strictly algebraic, with no reference to the appropriate picture.

A second main development is field theory; some of the topics of volume one are here treated in more depth; thus Galois theory is developed starting from the

Jacobson-Bourbaki correspondence. There is a thorough study of crossed products and the Brauer group, valuation theory and formally real fields. Group representations get a long chapter to themselves, with a succinct account of the representations of the symmetric group, as well as Brauer's theorems on characters.

Besides these two main lines there is an introductory chapter on categories and one on universal algebras (where constructions such as direct and inverse limits can be found, together with ultraproducts). Of course there is also an introduction to homological algebra, constructing Ext and Tor, together with applications to the cohomology of groups and algebras and the syzygy theorem.

Clearly the book covers rather more than basic notions and its primary purpose (to serve as a textbook for research students) is admirably fulfilled in that it provides at least half a dozen different courses. It could also be used for self-study, although all but the best students would find the going tough (despite numerous exercises). But there can be little doubt that the book will establish a place for itself as a reference work as well as a textbook.

P.M. Cohn

P.M. Cohn is professor of mathematics at Bedford College, London, and author of *Algebra* (1974) and *II* (1977).











## Overseas continued

Adelaide College of the Arts and Education  
South Australia

Adelaide College of the Arts and Education is an Australian College of Advanced Education which offers a range of graduate and post graduate courses in the visual arts, performing arts, design, Aboriginal studies, community languages and physical education. The college also offers a wide variety of teacher education programmes at the primary, secondary, technical and further education level.

The college has over five hundred staff and more than five thousand students undertaking its courses via a number of study modes.

The college invites applications for the following contract position:—

LECTURER/SENIOR LECTURER IN  
HOME ECONOMICS

The college offers a bachelor of education degree with specialisation in home economics and a graduate diploma in home economics. The college is also planning a bachelor of applied science degree in home economics which is intended to begin in 1982. The home economics department has recently moved into a newly constructed facility at the Underdale campus and forms part of the faculty of applied sciences. The appointment will be made in one of the following areas:

Psychology/Sociology/Philosophy of Home Economics, Home Economics Education and Curriculum, Textiles and Clothing.

Strong candidates with expertise in other aspects of home economics will be considered.

Applicants should have a higher degree with a major in home economics. The successful applicant will be expected to take a leadership role in the development and teaching of courses in home economics and its promotion in the community. Length of contract — three years.

A more detailed statement concerning the college and the position may be obtained from Dr. J. Walker, Tel: 618 3620011.

Senior Lecturer I: 28,090 - 29,818  
Senior Lecturer II: 25,863 - 27,495  
Lecturer I: 22,388 - 25,132  
Lecturer II: 19,132 - 21,877  
Lecturer III: 16,489 - 18,890  
(Aust. Dollars 1.00 = US Dollars 1.488 = Pounds St. 0.5228, as at 27 April, 1981).

Applications setting out name, address, qualifications and experience, together with the name and address of three referees, are to be addressed to:—

The Secretary,  
Staff and Council Services  
Adelaide College of the Arts and Education  
Holbrooke Road, Underdale,  
South Australia, 5022,  
Australia.

Closing date: 14 June, 1981.

TBS12

TASMANIAN COLLEGE OF ADVANCED EDUCATION  
SCHOOL OF SOCIAL WORKSENIOR LECTURER IN SOCIAL WORK  
(Ref. No. 11181)LECTURER IN SOCIAL WORK  
(Ref. No. 11281)

(Tenurable or three-year contract)

Applications are invited for the above positions within the School of Social Work.

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Desirable qualifications are significant professional experience with a record of publication. Preference would be given to an applicant holding post-graduate qualifications in Social Work.

Appointment will be made at one of the following levels (according to qualifications and experience):

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Lecturer II: A\$19,132-21,877 per annum  
Lecturer I: A\$22,388-25,132 per annum  
Senior Lecturer II: A\$25,863-27,495 per annum  
Senior Lecturer I: A\$28,090-29,818 per annum

Enquiries of an academic/professional nature should be directed to Dr. B. A. Gelin, Head of the School, telephone (003) 26 0254.

Applications quoting the above Reference Number and including details of qualifications and experience and the names of three referees should be forwarded to: The Registrar (Appointments), TASMANIAN COLLEGE OF ADVANCED EDUCATION, P.O. Box 1234, Launceston 7290, AUSTRALIA. CLOSING DATE: 1 June 1981.

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Please send resume and letter of application by June 1 1981, to receive full consideration, to:  
Director of Personnel/A.A., SUNY College of Technology, Box 8107, 811 Court Street, Utica, NY 13502, U.S.A.

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TBS12

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In addition, the successful candidate will be expected to take part in the experimental or theoretical activities of one of the research groups in the Department. The fields of interest are Magnetospheric Physics, Plasma Physics, Solid State Physics and Foundations of Quantum Mechanics.

The salary scale attached to the post is: R10 925 + 675 - 14 570 + 810 - R19 380.

The commanding salary notch will be dependent on the qualifications and/or experience of the successful applicant. In addition, a service bonus of 50% of one month's salary is payable annually subject to Treasury Regulations.

Application forms, further particulars of the post and information on pension, medical aid, staff bursary, housing loan and subsidy schemes, long leave conditions and travelling expenses on first appointment are obtainable from the Registrar, University of Natal, King George V Avenue, Durban, 4001 South Africa with whom applications, on the prescribed form, must be lodged not later than 10th July 1981 quoting Ref. D3281.

TBS12

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## Polytechnics continued

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Applicants for the posts in the Department of Mechanical and Civil Engineering should have a special interest in developing research and industrial consultancy in one of the following areas: systems engineering, plant engineering, manufacturing systems with materials science, energy stress analysis, engineering design.

Applicants for the posts in the Department of Electrical and Electronic Engineering should have an interest in developing research and industrial consultancy in one of the following areas: Computers, Electronics, Control Systems.

Application forms and further particulars are obtainable from The Personnel Officer, North Staffordshire Polytechnic, College Road, Stoke-on-Trent, ST4 2DE. Tel: Stoke-on-Trent (0782) 45831 Ext. 297.

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## Union view

The national  
demand rules  
- not OK

The present state of education provision in the United Kingdom is the culmination of a series of movements, which have been slow but steady since the beginning of the century in the direction of a greater degree of "openness". Barriers of sex, age and social class have partly been in the hope that ultimately all who have the need or feel the desire to expand their horizons might have the opportunity to do so. Each of the Education Acts since 1900 has made its contribution, and the introduction of mandatory grants to cover living expenses as well as fees has opened avenues previously closed to certain groups; most recently, the establishment of the Open University has provided means for the recovery of lost opportunities for those who can afford the time and money. While this trend towards increased availability of education has occupied the centre of the educational stage, the policy of successive governments also appears to have been following from two distinctly separate attitudes towards the purpose of education: one relating to the school pupil and the other to the post-school student.

For pupils below the age of about 19 years there is great concern with the academic ability of the individual. Education policies can be seen to embrace efforts to ensure that each level of ability is provided with an appropriate programme of studies and examinations to match. The existing CSE and GCE O levels, the proposed CEE and consideration of N, F and I levels are all examples of this approach. However, at the post-19 stage of education, particularly in most of the higher education area, there has not been the same concern for the academic abilities of the individual nor with matching that ability with a qualification. The range of courses made available was determined over a long period by the "Robbins principle" although, lately, recognition of national need has become more important

and threatens to dominate Government thinking. In the Finniston report it is proposed that the education of one large of the population of the British Isles should be designed and controlled to achieve a specific purpose which has little directly to do with a person's individual aspirations.

The absence of a general ability-directed policy for the post-19 years age group has consistently disadvantaged one class of young people, namely the one A level achiever. The Department of Education and Science statistics for 1977-78 show that 21,300 school leavers obtained a single GCE A level pass that year; that represents 20 per cent of all A level achievers. A further 23 per cent obtained two A level passes but had mixed subjects so detracting from their value as entry qualifications for a degree course. In 1966-67 teacher training absorbed 14,400 who achieved a single A level

and a peak of 15,100 was reached in 1968/69. The equivalent figure for 1979/80 is 1,100 (*DES Statistical Bulletin 1280*). While the qualified participation rate in higher education for those with more than two A levels has remained constant over the period 1966-80 and the age participation rate for these people has remained substantially constant since 1972 after an initial increase from 1966, the equivalent rates for the one A level achiever have shown almost continuous decreases. *DES Statistical Bulletin 1380* shows that in 1978/79 as many as 65 per cent of pupils leaving school with one A level went to destinations other than Higher or Further Education. (Similar figures have been produced for Northern Ireland). Generally it appears that the "loss" of women from education is higher than that of men. Setting entry requirements at three A levels for such courses as physiotherapy, which traditionally provides careers in an area where person-to-person contact is of major importance, can only have contributed to this "loss" for girls leaving school with lower qualifications.

available to the unemployed? Should it be tackling just the short-term needs to help people cope until they undergo retraining or find another job? How should adult education be dealing with the long-term problem of unemployment? To what extent can it meet the real needs of the unemployed? Do unemployed people have a clear idea of what they want from adult education, and how can they be helped to find out?

Part of the trouble is that the unemployed do not make up a readily identifiable, homogeneous group. Married women returning to work, black people, school leavers, redundant executives and unskilled people all have different hopes and expectations.

There are added problems in organization of the unemployed. Unemployed people cannot be organized round a workplace, not all belong to a union, married women do not appear on the unemployment register. Only in an area dominated by one industry, such as Corby's steelworks, are unemployed people likely to be living side-by-side in the same street or housing estate.

In one North Country town adult education workers went into the schools to talk about unemployment at parents' meetings. Workers based in an adult education centre strategically placed next to the unemployment office went down the data queue with handbills offering help. About 30 unemployed people turned up to the meeting, and while some were fed into existing adult education provision others created a demand for new courses.

Staff from Bradford College were invited into textile factories before they closed down to find out what sort of classes the redundant workers might want. This exercise resulted in a series of short courses (lasting only 21 hours a week so they were still eligible for unemployment benefit) on a variety of topics ranging from catering and typewriting to car repair, carpentry and communications skills.

Bradford College, as well as the National Extension College among others, has also had considerable suc-

cess with courses helping people learn the practical aspects of setting up a small business. A recent survey by South Yorkshire County Council of 100 students who attended their evening classes on the subject showed that 36 new businesses were set up by students, employing 124 people. They included house repairs, making sports equipment and metal working.

Other courses in other parts of the country have endeavoured to help people understand why they are unemployed. Hull unemployed workers education project, which is a joint Workers' Educational Association and Hull University industrial studies unit venture, runs courses on the economic reasons for unemployment, welfare rights, and training for trade unionists who represent unemployed people at appeals tribunals. The WEA in Wales has put on Poundstretches courses to help people cope with living on the dole.

One thing is becoming more clear to adult educators involved in this sort of work: past assumptions that better education or training could prevent unemployment are not being borne out. The Manpower Services Commission has warned that adult unemployed will suffer more as it increases its training resources to the young.

One of the major tasks that adult education could be tackling is in helping unemployed people get away from traditional patterns of employment and set up their own alternative work structures. This could include not only training in specific skills but also advice on how to set up co-operatives or job sharing schemes where skills and not money are exchanged.

One of the most exciting innovations is the move to set up unemployed workers' centres by the Trades Union Congress and also the Workers' Educational Association. There must be plenty of lively scope for adult educators to co-operate with these centres helped by finance from local education authorities and the MSC, and with positive encouragement from the education unions and the Advisory Council for Adult and Continuing Education.

The author is chairman of the Association of Polytechnic Teachers education panel.

Ray Wood



Charlotte Barry

At least three million people will be jobless by the end of this year - and that's now official. So the adult education turning its attention to the particular needs of the unemployed? This question has proved to be a prime concern of workshops and discussion groups during the recent East of England conference. The participants have ranged from university extra-mural tutors to local authority adult education officers, adult literacy workers, the Workers' Educational Association and other voluntary organizations.

But an overriding problem seems to be that although adult educators have recognized the immediate and long-term problem of unemployment, they are not all clear about or agreed on how to tackle it.

Should adult education be simply trying to fill the endless leisure time

## Don's diary

## Sunday

I find, now that each week is seven Sundays long, the former joys of relaxation at weekends are commonplace and spoiled. Reading *The Sunday Times* should afford some diversion (having had to tolerate the *Weekend Australian* for three years) but even this small pleasure is eroded by a compulsive urge to scan the appointments section first. Jobs abroad seem to dominate in both number and size of salary: even an ordinary seaman in Oman gets £10,000 a year - and I can't help wondering that 15 years ago such advertisements would have been indicative of a brain drain. Nowadays almost every Commonwealth country seems anxious to recruit Maggie's recessionals.

In the afternoon I go for a bicycle ride with my visiting brother-in-law. He, of course, of the four younger members of my extended family, has a full-time job. I wonder where we all went wrong and conclude that it was by accumulating too many master and doctoral albatrosses.

Time for cycling through the Cambridgeshire countryside and villages in spring is, however, some recompense for having joined the ranks of the unemployed.

## Monday

The mood of each day's job hunting is partly determined by the morning post - or lack of it! Today starts well with the arrival of two application forms but soon plummets to despair when I scan the Creative and Media section of the public library's *Guardian*. Both my wife (also unemployed) and I have become experts on each day's newspapers - we know by heart which type of jobs occur on each day in every paper. The bicycle ride home in pouring rain serves to dampen my spirits even further.

I try to restart a piece of research which urgently needs finishing but the intricacy of tropical copepod taxonomy loses its appeal when there is little else to do. A recently rejected paper sits on my desk awaiting an extensive rewrite but I am unsure where to start. The referee's comments indicate that she was not as impartial as I would have liked.

All-in-all, a bad day, eased only by the discovery of an off-licence selling very cheap beer.

## Tuesday

No mail. Could this be the start of another bad day? A wet pedal to the library *Times* and *Guardian* confirms my earlier foreboding. The *Telegraph* yields the same result - thankfully - how could I ever confess to my friends that I found a job by looking at it? Even the *DHSS Guide to Supplementary Benefit* offers only ironic amusement. I can't claim benefit because, having saved more than £2,000 for a house deposit, I am excluded on the grounds of wealth! There seems to be little sense in risking long-term unemployment and all our savings for the remote chance of a job in academia which might end in redundancy and I decide that employment in the private sector might be a viable alternative.

I re-read some earlier Don's Diaries while drinking a large, evening sherry. Most contributors imply that lecturing is not well-liked. Perhaps some universities could start job-sharing whereby those of us that like to teach and research could have half a job with the rest going to those that find fulfilment in committees and conferences.

## Wednesday

Wet again but a postal invitation to an interview at a tutorial centre arrives. The possibility of part-time teaching O and A levels doesn't raise the gloom

but the money might help our financial crisis.

The library reading room remains depressing. It is always full of obvious down-and-outs sheltering from the rain and cold. A social worker friend tells me that libraries are favourite places for the homeless to spend the day - could this be my future too? Another attempt to borrow *Cry the Beloved Country* ends abortively because I resent paying a 25p reservation fee. Five completed pages of an application form and c.v. cost nearly £1 to Xerox and post and I'm broke again until Friday. I've recently read somewhere that expenses incurred in applying for jobs aren't tax deductible - another small injustice to crush the unemployed.

## Thursday

I awake full of the joys of spring. It's warm and sunny and *Nature* and *New Scientist* are out today! Needless to say, I find the search must go on but at least it doesn't involve pounding the paving stones of a derelict northern manufacturing town.

A walk in the afternoon sunshine along the banks of the Cam to feed the ducks gives me a sense of perspective. What I find most depressing and hard to hear about unemployment is the isolation from colleagues. Gone is the intellectual stimulation of departmental coffee time gossip and the challenge of overcoming student apathy. Instead, the mundane chores and irritations of domesticity press in upon me until everything else becomes subordinate.

A prominent politician makes an evening post-Budget speech about the evils, injustices and indignities of unemployment. I can hardly contain my rage at the hypocrisy. Very few politicians have ever experienced the shame and indignity that the unemployed are obviously meant to feel while standing in a dirty, shabby office awaiting interrogation by a surly SS officer who has obviously been brainwashed into believing all claimants are fraudulent scroungers.

Unemployment has had one good effect upon me - I have become politicized and aware of 2.5 million others.

## Friday

I read of the vice chancellors' discomfort at the proposed cuts in higher education spending. My pity for redundancy is waning. Perhaps they too will begin to realize how anomalous universities can be, especially when employing younger academics. The complexity of older tenured academics in allowing university administrations to force redundancy payment waivers on holders of successive untenured fellowships has always disgusted me. Now the boot is on the other foot for some. In the afternoon I make some progress with mangrove copepod taxonomy.

## Saturday

A rejection arrives in the post. I'm not too surprised because I know there were more than 400 applicants.

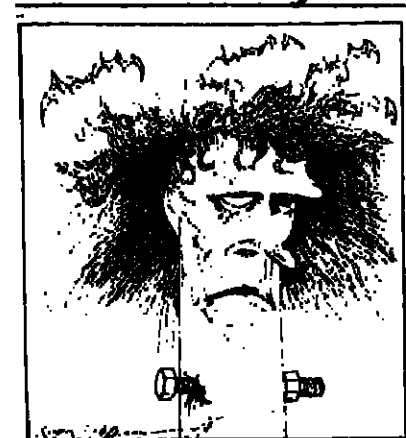
Dejected, and further daunted at having to clean the house with a useless vacuum cleaner provided by the landlady I decide that only fools save for house deposits and buy a new Hoover. I subsequently discover that Hoovering is quite a relaxing therapy. It's also much cheaper, for the long-term unemployed, than the £1 prescription charge for Valium.

Robert Hantcock

The author is a currently unemployed ecologist.



## Laurie Taylor



Hi there, and welcome to another edition of University Cuts Challenge! And tonight it's the Department of Marine Philosophy from Swansea against the Department of Serbian Linguistics from Newcastle. (Prolonged applause, shouting and vigorous waving of maces).

Remember the winning department tonight goes on to meet next week's winners. And the losers - well, it's the UGC cut for them! But remember every loser will receive a fat redundancy payment. So this is the show where everyone's a winner. Right? O.K. So let's get the ball rolling with the Department of Marine Philosophy from Swansea. What's your first bid?

We'll go for staff-student ratio.

STAFF STUDENT RATIO. That's a big one to get us going. O.K. Let's hear it Swansea.

11.37.  
11.37. That's really something to beat. Not much slack there. O.K. Newcastle what can you do?

10.47.  
(Cries of 'aah')  
Don't worry, Newcastle. Still a long way to go. And your turn to play first. Research grants.

Alright, Newcastle. Name the figure to beat.

£182,163.

That's a lot of loot. It's all yours, Swansea.

£235,894.  
(Cheers)

Would you believe it! That's 2-0 to Swansea. Well on their way to security of tenure - at least for this week. And now they're playing the JOKER. Let's hear, the bid?

Average A level Grades.  
Sack it to us, Swansea.

Three Cs.  
The Big Cs. Now Newcastle, can you take that? And a Joker riding on it. Double points, remember.

Two Cs and a D.  
(Cheers and mascot waving)

Would you believe it. Just one grade point difference. But that's life. That's the University Cuts Challenge. And that's Swansea 4-0 in front. Redundancy starting Newcastle in the face. Can they pull back in this final round? And out comes their JOKER. Fire away, Newcastle.

Age Profile of Staff.  
Lay it on us, Newcastle.

Average age 52.5.  
Not much premature retirement around there. Right? Swansea can you beat it? Hang on to your seats boys and girls.

52.3.  
Would you believe it. They can't just two decimal points. So Swansea go through 5-0 and that means involuntary redundancy for all this Newcastle Department. Nice to have had them on the show. Good luck in the new jobs. And now Swansea. Congratulations. You go on to the next round in which you meet the Department of Computation from Cambridge. That could be a tracker. Remember they just edged through last week on unit costs. Meanwhile its goodbye from all of us here, Newcastle University.

Goodbye.  
Swansea University.

And not forgetting our genial hosts the UGC.

Goodbye.  
See you all next time.  
(Everyone waves silently. Slow fade)

## LETTERS TO THE EDITOR

## Responsibility for funding overseas students

Sir, - I refer to your editorial (*THESE*, May 1) concerning *The Overseas Student Question*, the title of the book I edited for the Overseas Students Trust. You say in the editorial that I and other participants in talks sponsored by the OST believe "like the two Select Committees" that overseas students should be subsidised from the aid budget. You go on to make the counter point that there is an "arguable case that the DES should have some interest in the formulation of policy".

I am afraid that you misrepresent what we say in the book, perhaps through understandable haste in offering early comment. The book in fact says the exact opposite of what you allege. It argues (p.235) for a division of responsibility in funding overseas students and specifically says that this "would differ from that suggested by a number of Parliamentary committees which recommended that all concessions from the full-cost fees policy should be financed from aid funds".

It suggests very specifically that it will be in our interests to include in our funding arrangements some students from countries other than poor developing countries and that for example commercial factors, educational and research benefits, cultural exchanges, should all be taken into

account; quite apart from our obligations to relatively prosperous places like Hongkong.

Not only is it "arguable" that DES should have some interest in the formulation of policy but it is thus argued in the book. On p.234 DES is specifically mentioned in the context of the suggestion that "in the area of policy-making... all those departments which have an interest in the matter should be able to contribute their perspective to policy formulation". Although we suggest that the "lead department" in the coordination of policy should henceforward be the FCO, it is pointed out that DES must be consulted at every stage. Indeed we attribute to DES a central interest in welcoming overseas students "so as to reflect its responsibility for making the education system internationally-minded and outward-looking, for encouraging foreign scholars to work among us and make their substantial contribution to our research and development programmes". The mystery to many people is that these interests and responsibilities appear not to have been given fuller expression in the past.

Yours faithfully,  
P. R. C. WILLIAMS

University of London Institute of Education.

Sir, - The Overseas Students Trust is grateful for the kind references made in *The Overseas Student Question*. But John O'Leary is mistaken when he suggests in his introduction to the publication extracts that the trust will mind living with the results of the research it commissioned. On the contrary, we shall be delighted, as he forecasts, increasing reference is made to the book. The trust does not claim to know the answer to the overseas student question, but we do firmly believe (to paraphrase my chairman's preface) that the issues surrounding the subject need to be widely and sensibly debated on a basis of sound and up-to-date knowledge. This, we hope, will lead to the evolution of a coherent policy for the future, taking account of the many varied interests engaged.

If *The Overseas Student Question* can generate such a debate, the trust will be well satisfied.

Yours faithfully,  
M. R. KENYON,  
Director,  
Overseas Student Trust, 14 Denbigh Street, London, SW1.

## Conservative students

Sir - The story on the Federation of Conservative Students' plan to set up their own national students union seemed to take everything the speakers said at face value. Past experience indicates that that is the last attitude to adopt.

The FCS has been trying to get colleges to leave NUS for the past year yet not a single one has left and new colleges have actually affiliated. They have also completely failed to win any significant acceptance by the student body of the correctness of their advocacy of student loans.

The right wing who control the FCS are very good at making bold statements to the press of their grandiose plans but are hopelessly incapable of getting students to agree with them. And if they ever had any claim to represent ordinary students then the activities at their conference should put paid to that myth.

The National Union of Students has two Conservative students on its executive and welcomes the participation of all students in the union - we are therefore genuinely appalled by the present trend in Conservative student politics. We hope that the ultra-right extremists who seem to have found some footing in FCS, and are the prime movers of the attempt to set up the "non-political" and "cheap" alternative to NUS, will be cast aside - and a real debate held on how to improve the bodies that represent students and the quality of that representation. Students are much more in need of that than they are of racial jibes, ballot rigging and destructive populism.

Yours sincerely,  
DAVID AARONOVITCH  
President,  
National Union of Students.

## Discrimination in the UCCA system

Sir - In some of the group discussions at the recent Careers Research and Advisory Centre "Admissions to Higher Education", three issues regarding the UCCA system were raised which I would like to bring to the attention of your readers.

First, there was considerable resentment about the practice in some high-demand subjects - notably medical schools - of discriminating against students who devote one or two of their five choices to less competitive subjects, on the grounds that this somehow indicates "lack of motivation". This practice impedes one of the most important tasks for guidance staff, which is to encourage students to do some contingency planning - "what will I do if I don't get in?" Moreover, it takes no account of the demoralising experience for students of receiving five consecutive rejections. The fact that students can get into other courses in "CAP" and "clearing" is therefore not an adequate excuse.

Second, it was pointed out that the practice in some high-demand institutions of disregarding students who place is a powerful influence in trenching the existing hierarchy of status in higher education, and in deterring students from paying more attention to the current quality of institutions and departments and the current content of courses.

Third, it was pointed out that the increasingly arcane skills required to play the UCCA game discriminate in favour of schools sending large numbers of students into higher education. This needs to be carefully borne in mind by admissions staff if the interests of less-advantaged applicants are to be safeguarded. It also suggests that the system should be reviewed to see if it could not be made simpler and more equitable.

Yours faithfully,  
A.G. WATTS  
National Institute for Careers Education and Counselling,  
Bateman Street, Cambridge.

From the start a more appropriate model for the Leverhulme inquiry to follow was that of the Carnegie Commission in the United States. But even this had its dangers. There never was any hope that an unofficial British inquiry could attract the massive resources available to Carnegie, and so it would have been inappropriate to plan such a comprehensive inquiry as that stage-managed by Clark Kent from his office in Berkeley.

A high-level commission producing high-minded reports and policy-oriented seminars and publications and substantial and costly original research could never have been afforded by any

## Language teaching

Sir, - Was Philip Thody, in his review article on modern language teaching (*THESE*, May 1) being deliberately provocative by failing to mention even once what goes on in language departments in polytechnics and other colleges of higher education? Did he thereby prompt a retort from someone who would indignantly point out the important emphasis that CNA degree courses place upon communicative skills (usually in two foreign languages) and upon the ability to analyse (usually in a social science rather than literature)?

Did he know that someone would write and say that prose and translation classes (plus textual analysis, language laboratory work and discussion classes) are not looked upon as "chore" in polytechnics, but as the essential activities of modern language lecturers? Or does he perhaps have the feeling that CNA degree courses have not the right idea (whereas most such courses in universities have, he admits, got their priorities wrong) and cannot bring himself to say so?

Yours faithfully,  
DR. PETER GOLD  
Director of Studies,  
Modern Language with Political Studies,  
Sheffield City Polytechnic.

## Medical research

Sir, - You were kind enough to publish on April 3 an article headed *Medicine and Money Matters* about recent changes in the role of the DHSS and the research councils in the commissioning of research.

Your readers might like to know that the comments made in the article were based on a six year empirical study conducted within the DHSS and reported in *Government's Commissioning of Research: A Case Study*. This is available from the Department of Government, Brunel University at a price of £1.25.

Yours faithfully,  
M. KOCAN  
Brunel University



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201 Gray's Inn Road, London WC1X 8EZ. Telephone 01-437 1234

## Leverhulme and 'snibborism'

The Leverhulme inquiry into the future of higher education, which finally gets under way next week, may be a low key operation than originally envisaged by the enthusiasts for a "Robbins mark two". But in most respects its final form as a programme of seminars and publications is more appropriate than the razzmatazz of a high-profile commission of higher education's great and good.

In Britain such commissions only have a potential for real reform when they have been either established or powerfully endorsed by the Government and, as a current correspondence in *The Times* demonstrates, that potential power is only translated into actual influence on policy when a commission's recommendations correspond to current political priorities. In the case of higher education today not even the first stage of official commitment has been reached. So for the Leverhulme inquiry to have been established on Robbins lines, even if the money had been available, would have placed the programme in a false position from the start. To have adopted a quasi-commission model would have been to try to fight the wrong battle and with inadequate weapons.

From the start a more appropriate model for the Leverhulme inquiry to follow was that of the Carnegie Commission in the United States. But even this had its dangers. There never was any hope that an unofficial British inquiry could attract the massive resources available to Carnegie, and so it would have been inappropriate to plan such a comprehensive inquiry as that stage-managed by Clark Kent from his office in Berkeley.

A high-level commission producing high-minded reports and policy-oriented seminars and publications and substantial and costly original research could never have been afforded by any

conceivable British inquiry. Indeed it proved in the end to be too much even for Carnegie. When the commission was reconstituted as the Carnegie Council on Policy Studies in Higher Education in 1973, the top commission, level of the whole operation was effectively lopped off. Although the most visible part of the first stage of the Carnegie operation it had also probably been the least useful.

So it can be argued that by concentrating on policy-oriented seminars and publications, the new Leverhulme inquiry has preserved the meat in the Carnegie sandwich. For, if the money had been available, the temptation to plunge right into basic research related to higher education policy might not have been resisted. Then instead of straddling the worlds of political action and academic reflection the whole balance of the programme would have been lost and with it a major justification for its creation.

Indeed, because the number of adequate scholars working on these questions is strictly limited and the academic standing of the para-discipline of education is still insecure, the effect might have been even more malignant. Not only would the Leverhulme inquiry have been walled up in an educational researchers' ghetto (not the best position from which to influence a fastidious higher education opinion), but its academic influence might not even have been to raise the level of research in this broad area but merely to increase its volume, and so possibly depress it still further.

By not being established in the form of a commission the Leverhulme inquiry has also avoided another deadlier danger, much closer to home - that of being obliged to play the part of "Snibbor" (Robbins in reverse). For several years now the more advanced pessimists in British higher education, often to be found in the highest regions of the system, have been arguing that

what is needed is some commission or other agency to guide and preside over the contraction of our present system of universities, polytechnics, and colleges, in the 1980s, as skillfully and gracefully as Robbins presided over and guided the expansion of the 1960s.

It is a contentious argument with which large sections of opinion in higher education (including *The Times*) disagree. For the Leverhulme inquiry to have become the effective vehicle of snibborism would have killed it dead. Indeed any form of commission would have come under almost instant pressure to take up clear positions on a whole range of contentious issues and the whole value of the Leverhulme inquiry, which is as a relatively neutral, even expert, forum in which strategic choices can be identified, illuminated, and discussed would have been gravely undermined.

Of course, there is an opposite disorder to snibborism, the stubborn and myopic defence of the status quo whether individual career, department, institution, discipline, or sector. To this, too, the Leverhulme inquiry can act as a mild antidote by presenting a broader, and perhaps a more hopeful, picture of the future. For there can be no doubt that an important task ahead for British higher education is a process of fundamental self-examination, not with a view to contraction but to change. The Leverhulme inquiry can help to raise the collective consciousness of higher education and so help to identify and to grasp new opportunities. The fact that such consciousness-raising is especially difficult at a time of crisis like the present when so many people are principally concerned with the immediate defence against outside attack makes such a process even more important if the crisis is to be overcome.

The context of higher education planning has much in common with that in this country. The Government is opposed to more public expenditure, to "quangos" and to what it regards as bureaucracy. Youth unemployment is a problem. Higher education participation ratios have been stable since 1975. There is a trend towards a larger proportion of mature students, many of them part-time. Teacher numbers are being reduced. There is little prospect of expansion in the university and college sectors. The same stresses on vocational relevance, against the proliferation of liberal arts courses and in favour of so-called wealth producing activities are on the lips of Commonwealth and state politicians as on those of our own MPs and councillors.

A few weeks ago the TEC published Volume 1 of its report, which recommends to government the aggregate resources to be devoted to tertiary education for the 1982/84 triennium. After a relatively brief brush with the miseries of annual funding, the Australian restored triennial planning in 1978 and have managed to stick with it since. The 1,200-page report is in five parts. The first gives the overall picture and the recommendations on guidelines. The second, third and fourth contain the advice of the three councils. The last comprises appendixes to Part 1.

The overall effect is impressive. Here is description, review, analysis, documentation and recommendations relating to 19 universities, 69 colleges of advanced education, 210 major institutions and some 900 annexes in technical and further education. It comes from a single body, through which all university and GAE funds are channelled, and which supplements state spending on TAFE. Much of the analysis and many of the recommendations apply across the whole spectrum of higher education. Yet universities remain universities, colleges are still

colleges, technical and further education still constitute a separate sector. Indeed, the TEC itself asserts strongly that to offer an appropriate diversity of educational opportunity requires that the distinguishing characteristics of the three kinds of tertiary education be preserved.

There is little here to sustain the fears of those who believed that the commission's existence would erode university autonomy and distinctiveness, or to encourage advocates of comprehensive higher education in unit-type institutions.

The report is more explicit about the styles and levels of work appropriate to different kinds of tertiary institution than many pronouncements about higher education in this country. Sectoral distinctions are identified on such matters as research, higher degrees, liberal studies, middle level courses, bridging courses and institutional co-operation.

One or two examples must suffice. Nine separate policy guidelines are provided concerning courses and research for master's and other higher degrees in non-university institutions. The vocational orientation of CAE courses is underlined. The only master's degrees with a substantial research component that CAEs should offer are in areas not at present covered in universities. Direct entry to CAE master's programmes is not favoured. Students should normally have several years appropriate work experience. In order to monitor the development of master's level work in the non-university sector, states are called upon to provide the Advanced Education Council with information about the number of programmes approved in designated colleges.

So far as research is concerned, individual members of CAE staff are encouraged to undertake "practical problem oriented" study, but the TEC is not prepared to recommend special funds to support research activities in CAEs. Nor is it willing to fund new liberal studies degree courses in CAEs where teacher education has hitherto been the major activity. The diversification that a reduction in teacher training numbers makes possible is given a strong steer towards technology and business studies. Temporary development grants are proposed to lubricate movement in the desired direction.

The TEC is not averse to relating higher education supply to manpower considerations, where these can be estimated and the education/employment relationship is more or less clear. Teachers and doctors come into the reckoning just as they do in this country. But so do engineers and skilled tradesmen. It is perhaps too easy in Britain to forget that the so-called Robbins principle is two edged. If all qualified candidates who wish to find a place in higher education do so, the resulting participation ratios can be defended, even if they are inadequate to sustain social and technological developments which higher education should be helping to foster. Difficulty in tracing out connections between levels of participation and economic growth does not mean that they do not exist. Declining participation ratios and poor economic performance may be linked. Without growth, individual rates-of-return deteriorate and depress demand. Demand-led provision may reinforce the very conditions from which a less passive approach to higher education policy might help to rescue us.

The Australian TEC undoubtedly has its critics. I am in no position to pass judgement on all its analyses and recommendations. What the present report shows is the possibility of looking at the whole range of functions that higher education institutions perform.

What is also significant is the very existence of a published document of this kind. Visitors from abroad who ask for its UK counterpart ask in vain. To value such an overview implies a commitment to monolithic central planning. On the face of it, the openness and visibility of the TEC's processes of consultation on briefs and guidelines offer valuable ideas on future relations between DES, UGC and a new national body. If we are to get away from the box-and-whiskers language of bureaucratic centralism and local responsiveness, and begin to look rationally and calmly at what higher education can and should be doing to enrich our lives and those of our fellow men and women in the twenty-first century, we cannot afford to ignore the experience of those who have already tackled problems that we have still to solve.

## A tip from overseas friends



William Taylor

With a good deal still to play for in the consultations about the form and functions of a national body for non-university higher education, there is much to be said for seeking out relevant examples from abroad. Unfortunately there are few exact parallels. Australia is closest in terms of traditions and institutional governance, although the powers of Commonwealth and state cannot readily be equated to central or local relations in this country. Even so, the way in which the Canberra-based Tertiary Education Commission (TEC), and its three statutory councils for universities, for advanced education and for technical and further education go about their work offers instructive pointers.

The TEC is small. Its chairman and the commissioners who head the three councils are full-time. There are five other part-time commissioners. Support staff number about 90. About half the membership of each eight-person council is from within the universities, the colleges of advanced education (CAEs) and technical institutions (TAFE) respectively, the rest from outside. Thus there is no attempt to provide the kind of representative structure which Oakes recommended here, and which our present masters regard as cumbersome and probably unworkable.

The context of higher education planning has much in common with that in this country. The Government is opposed to more public expenditure, to "quangos" and to what it regards as bureaucracy. Youth unemployment is a problem. Higher education participation ratios have been stable since 1975. There is a trend towards a larger proportion of mature students, many of them part-time. Teacher numbers are being reduced. There is little prospect of expansion in the university and college sectors. The same stresses on vocational relevance, against the proliferation of liberal arts courses and in favour of so-called wealth producing activities are on the lips of Commonwealth and state politicians as on those of our own MPs and councillors.

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## Aston team predicts massive job losses

by Ngaio Crequer

Aston University must lose up to 150 academic and 300 non-academic staff over the next three years because of Government spending cuts and high overseas student fees.

A discussion document drawn up by the vice-chancellor, Professor Frederick Crawford, and an interim budget report show that the university is likely to be reduced by a quarter, double the contraction predicted by vice-chancellor for the whole university system.

The report of the advisory group on budget adjustment says the university will have to reduce its expenditure or increase its income by between £3.7m and £4.5m, that is 18-23 per cent, over the next three years. Student numbers would fall from 5,381 in 1980-81 to 4,000 in 1985-86 at best, and 3,760 at worst.

Professor Crawford said: "The severity of the projected cuts demands that the unthinkable be thought." This was a projected reduction of 120-150 academic and 240-300 non-academic staff. Early retirement was the least objectionable solution but for each academic this would cost £22,000. This would rapidly deplete reserves, or if spread over ten years "leave the university with a persistent financial burden of phantom staff."

"If our UGC support is reduced, the pay element must be reduced correspondingly. The spectrum of unsavoury

alternatives includes limited wage increases or wage reductions, short-time working, and voluntary or involuntary redundancy. It raises dispiriting questions, perhaps unprecedented within the university world, of equity, legality and process, which have to be squarely faced if we are to be prepared to act decisively should such alternatives be forced upon us."

He said a vigorous campaign to recruit more overseas students was required and "more effort is needed, including support from departments that have preferred not to accept appreciable numbers of overseas students in the past."

Aston must respond to new disciplines. "A steady state or contracting university must be ready to phase out its relatively unsuccessful and even quite successful activities in favour of new ones that are likely to be even more successful."

As for curricula, "resources are scarce, and to continue teaching subjects for which there is little student interest, or to carry out costly research for little result is unsatisfactory both for the individual and the university. It follows that resource allocation should relate to likely returns, and that evaluation of both past performance and present options is required."

Professor Crawford said that departments should formulate their own plans by July 1, updated to respond to UGC proposals in May or June.

## Unions angry at cut threat

by David Jobbins

Union leaders are to approach an education authority about its threat to cut lecturers' jobs to pay for the extra 1.5 per cent secured in the 1981 pay award above the Government's cash limit.

North Yorkshire County Council budgeted only for a 6 per cent settlement, but lecturers and school teachers eventually won 7.5 per cent. The authority has decided to meet the extra cost by shedding jobs, although it hopes that compulsory redundancies will be avoided by redeployment and early retirement.

The share of the savings for further and adult education is £116,000, and the authority says nine posts must go. The National Association of Teachers in Further and Higher Education is angry not only at the threat to jobs but at the effect on the service.

It is particularly worried at the fate of adult education, which it says was severely cut by the county in 1979-80. "They are trying to do away with the full-time professionals who run adult education," Naffie said.

Next week a national deputation led by Naffie president Mr Jim Richardson is to discuss the issue with the authority. He is to be accompanied by Mr Stewart Marsden, treasurer of the Association for Adult and Continuing Education.

## Study looks at contracts

An urgent review of problems facing researchers on short-term university contracts is to be undertaken by a group of vice-chancellors and officials of the Association of University Teachers. The six-member group was set up following last week's meeting of the joint consultative committee of the AUC and the Committee of Vice-Chancellors and Principals and is expected to report by the end of May.

The panel will consider the difficulties facing researchers whose contracts are not to be renewed by a department — many of these have very specialised abilities and knowledge, while present job prospects are very limited.

It will also study ways of helping such researchers get redundancy payments although they are often required to sign redundancy waiver clauses when joining a research team.

The deputy general secretary of AUT, Mr John Akker, said the decision to set up the group followed pressure by the association which had written to universities, research councils and Government departments urging them to take action over the plight of short-term contract researchers.

"There is so much resentment being built up that the universities and research councils would be foolish if they did not act urgently," he added.



The sixteenth century mathematical innovator, John Napier, is the star of a series of teaching posters produced by Edinburgh University designed to stimulate students' interest in maths.

The nine posters produced by the mathematics teaching group in conjunction with the graphics section of the university's audio visual services unit, relate the life and times of the Baron of

Marchiston to some of the mathematical concepts and calculating aids in which he was interested and pioneered. The group has also produced another series of five posters describing and illustrating four unsolved problems of elementary number theory: the integer cuboid problem; the palindromic number problem; Gilbreath's conjecture; and an iteration problem. While con-

centrating on theoretical notions, they are presented in such a way as to stimulate students to think about maths and its applications.

The Napier series costs £20, the problems set £10. Both are available from Dr J.W. Searl, department of mathematics, King's Buildings, Mayfield Road, Edinburgh EH9 3JZ.

## V-Cs recommend chief scientific adviser

by Robin McKie  
Science correspondent

University vice-chancellors have put forward a major package of proposals for rejuvenating Government science policy. These recommendations are made in a Committee of Vice-Chancellors and Principals submission to the House of Lords select committee on science and technology and aimed at rectifying several shortcomings in the Government's science dealings identified by the CVCP.

Their plans include:  
● The appointment of a chief scientific adviser to Government to provide "clear, concise and balanced assessment" of advice from various Government departments;

● The establishment by research councils of scientific development boards to support lucrative academic-industrial research projects;  
● Short university courses for civil servants to help them grasp important scientific issues.

In its evidence to the Lords committee, the CVCP states that scientific and engineering problems rarely fall into neat departmental classifications. "It therefore seems clear that chief sci-

entists of different departments should meet from time to time to discuss mutual and overlapping problems."

These meetings should be chaired by a chief scientific adviser to the Government, "a highly respected scientist with broad experience and good judgement" who would work within the Cabinet Office. The CVCP also argues that departments should take greater advantage of the scientific expertise available at universities and research councils who are "particularly well placed to identify potential area of growth in science and technology and to bring their views to the attention of the Government."

The submission adds that the chief scientific adviser would be responsible for evaluating policy for scientific and technological innovation, for periodic reviews of Government technical strategies and for the development of a broad overview of national needs for scientific and technological research.

The CVCP also argues that the customer-contractor principle for funding research through Government departments has not proved wholly successful although it accepts there must be division between research councils and departments in terms of financial responsibility.

## Aberdeen move

Professor George McNicol has been appointed principal of Aberdeen University from September on the retirement of Sir Fraser Noble. He has been professor of medicine at Leeds University since 1971.

## Tory bribes row

Aberdeen University Conservative Association has disaffiliated from the Federation of Conservative Students in the wake of allegations of bribery, corruption, and dirty tricks which have followed the end of the FCS conference last month.

## Poly science transfer agreed

by Paul Flather

Polymer science and rubber technology courses are to be transferred from the Polytechnic of the South Bank to the Polytechnic of North London in a move that is being keenly watched as a possible prototype for future course rationalization between polytechnics.

North London plans to integrate the courses with existing science provision. Formal talks with college unions begin shortly to smooth the transfer of staff between the two polytechnics. About 14 lecturers and an equivalent number of support staff, who work with polymers at South Bank are to be offered new contracts of employment.

The transfer was approved by a special Inner London Education Authority subcommittee with the support of the polytechnic directors. IEA officers hoped the move could be completed by September 1981, but it is likely to take longer.

The directors of the five London polytechnics have made it clear that they will oppose future piecemeal transfers. The Committee of Directors of London Polytechnics wants a proper higher education policy for London. Dr John Belashon, director of South Bank, said: "We think the decision is wrong because of the way we have integrated polymer work here. But more important we want a proper policy on courses in London."

Mr David Croome, assistant director of North London, said: "This has been a long and difficult process. We now want to get on with our plan to support the courses, and make the transfer work."

## Postgraduate teacher training cut condemned by ACSET

by Patricia Sandinelli

Government proposals to cut the Postgraduate Certificate of Education 1982 intake by a third and to reduce numbers by 10 per cent by 1985 were condemned outright by the Advisory Committee for the Supply and Education of Teachers this week.

The committee is to hold a series of emergency meetings during the next three months to re-examine figures from the Department of Education and Sciences as well as have discussions with funding bodies, on which basis it hopes to give advice to ministers before the summer recess.

The proposals contained in the DES paper were designed to reduce the

oversupply of teachers currently estimated at 7,000 annually (from a total of 17,000 target set in 1977) and likely to rise even higher in the mid-1980s.

The DES decision to argue for an immediate cut in PGCE courses rather than BEd courses was based on the grounds that the supply of secondary teachers, 80 per cent of which came through the PGCE, needed by 1983 would be dramatically reduced in comparison to 1980.

Should the proposal have been accepted, university departments of education which carry 50 per cent of all PGCE training would have been drastically affected. The DES proposed that the 50 per cent cut should be

achieved by limiting intake to primary and middle courses solely, and by suspension of recruitment in over provided areas while safeguarding shortage subjects provision. The PGCE target figure of 5,809 for intakes was exceeded by 1,000 last year.

The paper warns that if PGCE targets should continue to be exceeded by more than a small margin, the DES would be forced to reconsider whether the courses should have a mandatory award.

The proposed 10 per cent reduction which the committee argued could not be implemented until 1984 would, according to the DES have achieved a reduction in output from 17,000 to

15,000 per annum and yield a real annual total of some 13,500 new teachers.

The DES argued that it did not want a third round of rationalization resulting in some institutions discontinuing training altogether but some reorganization was necessary, particularly with the likely growth in demand for newly trained primary teachers from 1987.

Its only warning regarding the BEd and current under recruitment is that provision should be so planned as to minimise the impact of future fluctuations in demand between years and accommodate for possible reduction in demand in the middle 1980s.

## NEXT WEEK

British Disease 2: Lord Wedderburn on industrial relations  
Raymond Williams on Welsh history  
Quentin Skinner on Machiavelli  
Intellectual life in West Germany  
Future of the university - Lisbon conference report  
Chemistry books

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